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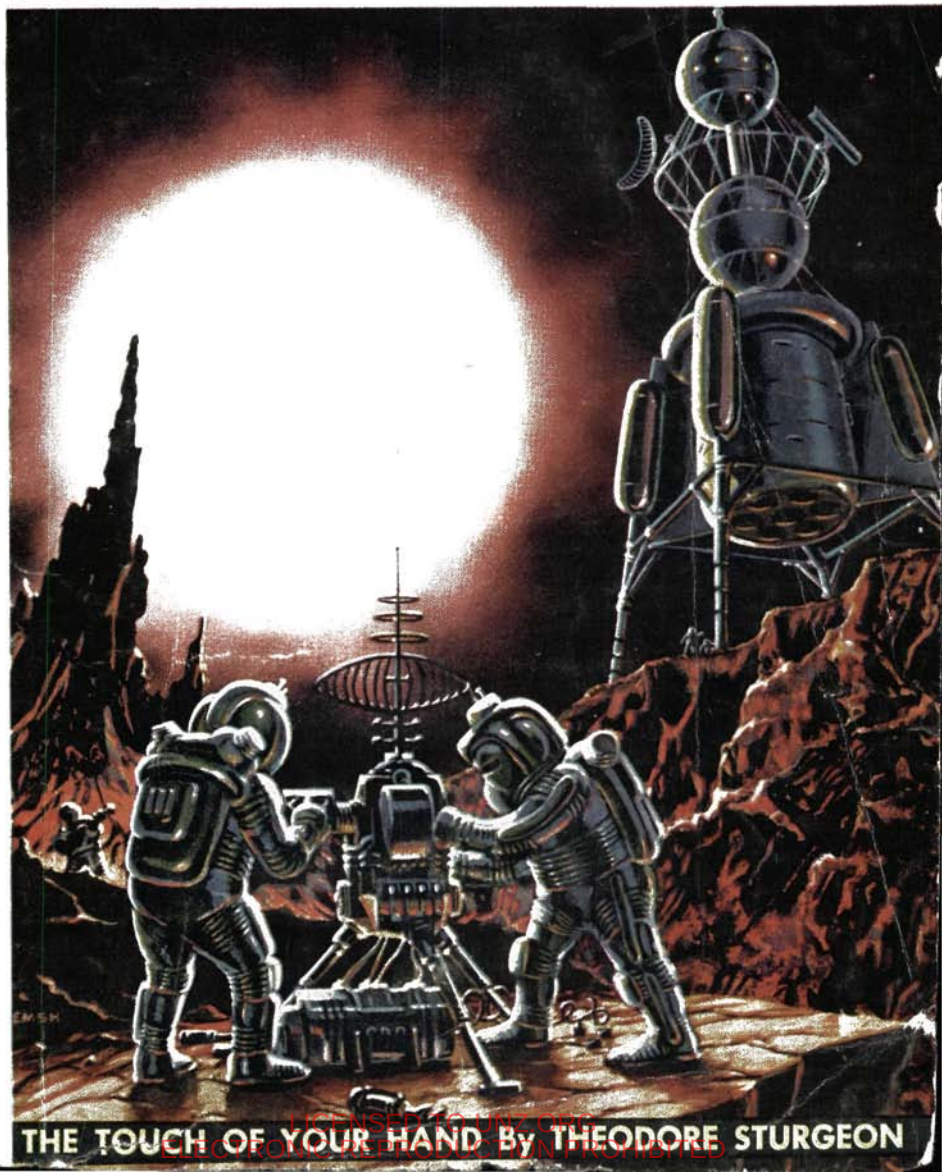

THE TOUCH OF YOUR HAND By THEODORE STURGEON

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What Strange Powers Did The Ancients Possess?

EVERY important discovery relating to mind power, sound thinking and cause and effect, as applied to self-advancement, was known centuries ago, before the masses could read and write.

Much has been written about the wise men of old. A popular fallacy has it that their secrets of personal power and successful living were lost to the world. Knowledge of nature's laws, accumulated through the ages, is never lost. At times the great truths possessed by the sages were hidden from unscrupulous men in high places, but never destroyed.

Why Were Their Secrets Closely Guarded?

Only recently, as time is measured; not more than twenty generations ago, less than 1/100th of 1% of the earth's people were thought capable of receiving basic knowledge about the laws of life, for it is an elementary truism that knowledge is power and that power cannot be entrusted to the ignorant and the unworthy.

Wisdom is not readily attainable by the general public; nor recognized when right within reach. The average person absorbs a multitude of details about things, but goes through life without ever knowing where and how to acquire mastery of the fundamentals of the inner mind—that mysterious silent something which "whispers" to you from within.

Fundamental Laws of Nature

Your habits, accomplishments and weaknesses are the effects of causes. Your thoughts and actions are governed by fundamental laws. Example: The law of compensation is as fundamental as the laws of breathing, eating and sleeping. All fixed laws of nature are as fascinating to study as they are vital to understand for success in life.

You can learn to find and follow every basic law of life. You can begin at any time to discover a whole new world of interesting truths. You can start at once to awaken your inner powers of self-understanding and self-advancement. You can learn from one of the world's oldest institutions, first known in America in 1694. Enjoying the high regard of hundreds of leaders, thinkers and teachers, the order is known as the Rosicrucian Brotherhood. Its complete name is the "Ancient and Mystical Order Rosae Crucis," abbreviated by the initials "AMORC." The teachings of the Order are not sold, for it is not a commercial organization, nor is it a religious sect. It is a non-profit fraternity, a brotherhood in the true sense.

Not For General Distribution

Sincere men and women, in search of the truth—those who wish to fit in with the ways of the world—are invited to write for complimentary copy of the sealed booklet, "The Mastery of Life." It tells how to contact the librarian of the archives of AMORC for this rare knowledge. This booklet is not intended for general distribution; nor is it sent without request. It is therefore suggested that you write for your copy to: Scribe Y.I.C.

The ROSICRUCIANS
[AMORC]
San Jose California

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SCIENCE FICTION

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What's The Good Word?

IN discussing Mario Pei's stimulating *The Story of English* (Lippincott), I mentioned briefly the vexing problem of the science fiction writer in foreguessing future language.

It can't be ignored, of course; objects and methods must be named so the reader will recognize them. All the author can do is apply logic, which sometimes works, as in the case of several commonly used terms invented by science fiction, but more often does not, as in terms that are born naturally, not synthesized.

The annoying difficulty can be followed closely in World Publishing Company's *Webster's New World Dictionary of the American Language.*

Unlike almost all other dictionaries, this one is a *record* of the words and phrases that you and I have helped to popularize rather than, as Ambrose Bierce defined such books: "A malevolent literary device for cramping the growth of a language and making it hard and inelastic."

Dictionaries don't determine "good" usage; people do. If that weren't so, we'd still be using the words listed in 1499 by Wynkyn de Worde's *Promptorum Parvulorum sive clericorum*, which, despite its Latin title, was the first dictionary to be printed on English soil.

Let's take a few examples from this *New World Dictionary* and see how language grows.

Television, TV and *video* are now established. *TV* first was used in 1907 in a magazine called *The World Today,* but engineers used *distant electric vision,* a cumbersome term that couldn't compete with science fiction's name for the device.

Jeep, nylon, kleenex and *cellophane* have invaded so many languages that *nylon* signifies "superfine" in Turkey and Greece, and Communist Hungary has banned *jeep* and *nylon* as decadent capitalistic word-inventions.

Jeep was coined by soldiers during World War II from the frigid military designation of the vehicle, "General Purpose Car," which naturally was abbreviated to "G.P." in stock lists. Using only logic, you'd expect it to be called *jeepie,* and perhaps it would have if the *Wacs* (another fortuitous military invention) had named the machine.

There is nothing snide in that comment, for sex has a lot to do with the devising of words. Women, or those who sell to them, created *panties, scanties* and

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nighties, while male merchandising is designed to make even the puniest man feel *outdoorsy.*

The armed services here and in England finally recognized the importance of initials, hence: *Wrens* and *Waves. Amgot* had to be shortened to A.M.G. because it was banned as a censorable word in Turkey.

Nylon and kleenex are trade names, born at the conference table, which gave us such valuable additions as *sudsy, deep-down goodness* and *LS/MFT.* (The process, known as *spitballing* in advertising, meaning to offer suggestions, was omitted, but should be included.)

Cellophane more classically is derived from *cella,* small room, plus *phanein,* to appear, seem—not too unlikely an invention for a writer, but he'd have had no chance to anticipate the others.

One argument I don't expect to be resolved quickly is the spelling of *hassel* vs. *hassle,* the first preferred by the *New World* and the second by the *New Century. New World* defines it as a heated discussion, squabble.

I accept *New World*'s spelling in entirety, the definition in part, and the etymology not at all.

The popular meaning is *any* frantic activity, usually although not always verbal, resulting in purposeless confusion and frustration.

There should be no "?" in giving its origin. Radio Row, which should know, accredits it to Joe Hassel, a *sportscaster* notable for his excitability. (*Newscaster* got into the *New World,* but *sportscaster* for some reason didn't.)

So, like *boycott, derrick, mae west* and *spoonerism, hassel* is, as the French would put it, the name of a name. Even if a science fiction writer of the past had known they would be, he might just as legitimately have chosen *cosgrove, manischewitz, dolly dawn* or *smithism.*

More troublesome, though, is deciding which slang terms will endure, which will enter the language as full citizens, and which will be the future equivalent of *odds bodkins* or *the bee's knees.*

Ain't, for example, is properly included in the *New World*—the first time, as far as I know, without being *snooted* (Middle English, *snute,* snout).

And Mark Twain is our authority for creative etymology. He proved that *Middletown* was named after *Moses* by dropping *-oses* and adding *-iddletown.*

If we were trying to predict instead of entertain, you'd be right in objecting to our inevitable *bloopers* (origin unknown). But would you rather wait for the correct lingo (*lingua,* tongue) or enjoy our guessing right now?

—H. L. GOLD

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the touch of your hand

By THEODORE STURGEON

Osser knew exactly what he wanted, why he wanted it, and how to get it—except that each one of his reasons was totally wrong!

"DIG there," said Osser, pointing.

The black-browed man pulled back. "Why?"

"We must dig deep to build high, and we are going to build high."

"Why?" the man asked again.

"To keep the enemy out."

"There are no enemies."

Osser laughed bitterly. "I'll have enemies."

"Why?"

Osser came to him. "Because I'm going to pick up this village and shake it until it wakes up. And if it won't wake up, I'll keep shaking until I break its back and it dies. Dig."

"I don't see why," said the man doggedly.

Osser looked at the golden backs of his hands, turned them over, watched them closing. He raised his eyes to the other.

"This is why," he said.

His right fist tore the man's cheek. His left turned the man's

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breath to a bullet which exploded as it left him. He huddled on the ground, unable to exhale, inhaling in small, heavy, tearing sobs. His eyes opened and he looked up at Osser. He could not speak, but his eyes did; and through shock and pain all they said was "Why?"

"YOU want reasons," Osser said, when he felt the man could hear him. "You want reasons—all of you. You see both sides of every question and you weigh and balance and cancel yourselves out. I want an end to reason. I want things done."

He bent to lift the bearded man to his feet. Osser stood half a head taller and his shoulders were as full and smooth as the bottoms of bowls. Golden hairs shifted and glinted on his forearms as he moved his fingers and the great cords tensed and valleyed. He lifted the man clear of the ground and set him easily on his feet and held him until he was sure of his balance.

"You don't understand me, do you?"

The man shook his head weakly.

"Don't try. You'll dig more if you don't try." He clapped the handle of the shovel into the man's hand and picked up a mattock. "Dig," he said, and the man began to dig.

Osser smiled when the man turned to work, arched his nostrils and drew the warm clean air into his lungs. He liked the sunlight now, the morning smell of the turned soil, the work he had to do and the idea itself of working.

Standing so, with his head raised, he saw a flash of bright yellow, the turn of a tanned face. Just a glimpse, and she was gone.

For a moment he tensed, frowning. If she had seen him, she would be off to clatter the story of it to the whole village. Then he smiled. Let her. Let them all know. They must, sooner or later. Let them try to stop him.

He laughed, gripped his mattock, and the sod flew. So Jubilith saw fit to watch him, did she?

He laughed again. Work now, Juby later. In time he would have everything.

Everything.

THE village street wound and wandered and from time to time divided and rejoined itself, for each house was built on a man's whim — near, far, high, small, separate, turned to or away. What did not harmonize contrasted well, and over all it was a pleasing place to walk.

Before a shop a wood-cobbler sat, gouging out sabots; and he was next door to the old leather-

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worker who cunningly wove immortal belts of square-knotted rawhide. Then a house, and another, and a cabin; a space of green where children played; and the skeleton of a new building where a man, his apron pockets full of hardwood pegs, worked knowledgably with a heavy mallet.

The cobbler, the leatherworker, the children and the builder all stopped to watch Jubilith because she was beautiful and because she ran. When she was by, they each saw the others watching, and each smiled and waved and laughed a little, though nothing was said.

A puppy lolloped along after her, three legs deft; the fourth in the way. Had it been frightened, it would not have run, and had Jubilith spoken to it, it would have followed wherever she went. But she ignored it, even when it barked its small soprano bark, so it curved away from her, pretending it had been going somewhere else anyway, and then it sat and puffed and looked after her sadly.

Past the smithy with its shadowed, glowing heart she ran; past the gristmill with its wonderful wheel, taking and yielding with its heavy cupped hands. A boy struck his hoop and it rolled across her path. Without breaking stride, she leaped high over it and ran on, and the glassblower's lips burst away from his pipe, for a man can smile or blow glass, but not both at the same time.

When at last she reached Wrenn's house, she was breathing deeply, but with no difficulty, in the way possible only to those who run beautifully. She stopped by the open door and waited politely, not looking in until Oyva came out and touched her shoulder.

JUBILITH faced her, keeping her eyes closed for a long moment, for Oyva was not only very old, she was Wrenn's wife.

"Is it Jubilith?" asked Oyva, smiling.

"It is," said the girl. She opened her eyes.

Oyva, seeing their taut corners, said shrewdly, "A troubled Jubilith as well. I'll not keep you. He's just inside."

Juby found a swift flash of smile to give her and went into the house, leaving the old woman to wonder where, where in her long life she had seen such a brief flash of such great loveliness. A firebird's wing? A green meteor? She put it away in her mind next to the memory of a burst of laughter—Wrenn's, just after he had kissed her first—and sat down on a three-legged stool by the side of the house.

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A HEAVY fiber screen had been set up inside the doorway, to form a sort of meander, and at the third turn it was very dark. Juby paused to let the sunlight drain away from her vision. Somewhere in the dark before her there was music, the hay-clean smell of flower petals dried and freshly rubbed, and a voice humming. The voice and the music were open and free, but choked a listener's throat like the sudden appearance of a field of daffodils.

The voice and the music stopped short, and someone breathed quietly in the darkness.

"Is . . . is it Wrenn?" she faltered.

"It is," said the voice.

"Jubilith here."

"Move the screen," said the voice. "I'd like the light, talking to you, Jubilith."

She felt behind her, touched the screen. It had many hinges and swung easily away to the doorside. Wrenn sat crosslegged in the corner behind a frame which held a glittering complex of stones.

He brushed petal-dust from his hands. "Sit there, child, and tell me what it is you do not understand."

She sat down before him and lowered her eyes, and his widened, as if someone had taken away a great light.

When she had nothing to say, he prompted her gently: "See if you can put it all into a single word, Jubilith."

She said immediately, "Osser."

"Ah," said Wrenn.

"I followed him this morning, out to the foothills beyond the Sky-tree Grove. He—"

Wrenn waited.

Jubilith put up her small hands, clenched, and talked in a rush. "Sussten, with the black brows, he was with Osser. They stopped and Osser shouted at him, and, when I came to where I could look down and see them, Osser took his fists and hammered Sussten, knocked him down. He laughed and picked him up. Sussten was sick; he was shaken and there was blood on his face. Osser told him to dig, and Sussten dug, Osser laughed again, he laughed . . . I think he saw me. I came here."

Slowly she put her fists down. Wrenn said nothing.

Jubilith said, in a voice like a puzzled sigh, "I understand this: when a man hammers something, iron or clay or wood, it is to change what he hammers from what it is to what he wishes it to be." She raised one hand, made a fist, and put it down again. She shook her head slightly and her heavy soft hair moved on her back. "To hammer a man is to change nothing. Sussten remains Sussten."

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"It was good to tell me of this," said Wrenn when he was sure she had finished.

"Not good," Jubilith disclaimed. "I want to understand."

WRENN shook his head. Juby cocked her head on one side like a wondering bright bird. When she realized that his gesture was a refusal, a small paired crease came and went between her brows.

"May I not understand this?"

"You *must* not understand it," Wrenn corrected. "Not yet, anyway. Perhaps after a time. Perhaps never."

"Oh," she said. "I—I didn't know."

"How could you know?" he asked kindly. "Don't follow Osser again, Jubilith."

She parted her lips, then again gave the small headshake. She rose and went out.

Oyva came to her. "Better now, Jubilith?"

Juby turned her head away; then, realizing that this was ill-mannered, met Oyva's gaze. The girl's eyes were full of tears. She closed them respectfully. Oyva touched her shoulder and let her go.

Watching the slim, bright figure trudge away, bowed with thought, drag-footed, unseeing, Oyva grunted and stumped into the house.

"Did she have to be hurt?" she demanded.

"She did," said Wrenn gently. "Osser," he added.

"Ah," she said, in just the tone he had used when Jubilith first mentioned the name. "What has he done now?"

Wrenn told her. Oyva sucked her lips in thoughtfully. "Why was the girl following him?"

"I didn't ask her. But don't you know?"

"I suppose I do," said Oyva, and sighed. "That mustn't happen, Wrenn."

"It won't. I told her not to follow him again."

She looked at him fondly. "I suppose even you can act like a fool once in a while."

He was startled. "Fool?"

"She loves him. You won't keep her from him by a word of advice."

"You judge her by yourself," he said, just as fondly. "She's only a child. In a day, a week, she'll wrap someone else up in her dreams."

"Suppose she doesn't?"

"Don't even think about it." A shudder touched his voice.

"I shall, though," said Oyva with determination. "And you'd do well to think about it, too." When his eyes grew troubled, she touched his cheek gently. "Now play some more for me."

He sat down before the instru-

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ment, his hands poised. Then into the tiny bins his fingers went, rubbing this dried-petal powder and that, and the stones glowed, changing the flower-scents into music and shifting colors.

He began to sing softly to the music.

THEY dug deep, day by day, and they built. Osser did the work of three men, and sometimes six or eight others worked with him, and sometimes one or two. Once he had twelve. But never did he work alone.

When the stone was three tiers above ground level, Osser climbed the nearest rise and stood looking down at it proudly, at the thickness and strength of the growing walls, at the toiling workers who lifted and strained to make them grow.

"Is it Osser?"

The voice was as faint and shy as a fern uncurling, as promising as spring itself.

He turned.

"Jubilith," she told him.

"What are you doing here?"

"I come here every day," she said. She indicated the copse which crowned the hill. "I hide here and watch you."

"What do you want?"

She laced her fingers. "I would like to dig there and lift stones."

"No," he said, and turned to study the work again.

"Why not?"

"Never ask me why. 'Because I say so'—that's all the answer you'll get from me—you or anyone."

She came to stand beside him. "You build fast."

He nodded. "Faster than any village house was ever built." He could sense the 'why' rising within her, and could feel it being checked.

"I want to build it, too," she pleaded.

"No," he said. His eyes widened as he watched the work. Suddenly he was gone, leaping down the slope in great springy strides. He turned the corner of the new wall and stood, saying nothing. The man who had been idling turned quickly and lifted a stone. Osser smiled a quick, taut smile and went to work beside him. Jubilith stood on the slope, watching, wondering.

She came almost every day as the tower grew. Osser never spoke to her. She watched the sunlight on him, the lithe strength, the rippling gold. He stood like a great tree, squatted like a rock, moved like a thundercloud. His voice was a whip, a bugle, the roar of a bull.

She saw him less and less in the village. Once it was a fearsome thing to see. Early in the morning he appeared suddenly, overtook a man, lifted him and

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threw him flat on the ground.

"I told you to be out there yesterday," he growled, and strode away.

Friends came and picked the man up, held him softly while he coughed, took him away to be healed.

No one went to Wrenn about it; the word had gone around that Osser and his affairs were not to be understood. Most things could be understood by anyone. Wrenn's function was to explain those few things which could not be understood. But certain of these few were not to be understood at all. So Osser was left alone to do as he wished—which was a liberty, after all, that was enjoyed by everyone else.

TWILIGHT came when Jubilith waited past her usual time. She waited until by ones and twos the workers left the tower, until Osser himself had climbed the hill, until he had paused to look back and be proud and think of tomorrow's work, until he, too, had turned his face to the town. Then she slipped down to the tower and around it, and carefully climbed the scaffolding on the far side. She looked about her.

The tower was now four stories high and seemed to be shaping toward a roof. Circular in cross-section, the tower had two rooms on each floor, an east-west wall between them on the ground floor, a north-south wall on the next, and so on up.

There was a central well into which was built a spiral staircase —a double spiral, as if one helix had been screwed into the other. This made possible two exits to stairs on each floor at the same level, though they were walled off one from the other. Each of the two rooms on every floor had one connecting doorway. Each room had three windows in it, wide on the inside, tapering through the thick stone wall to form the barest slit outside.

A portion of the castellated roof was already built. It overhung the entrance, and had slots in the overhang through which the whole entrance face of the tower could be covered by one man lying unseen on the roof, looking straight down.

Stones lay in a trough ready for placing, and there was some leftover mortar in the box. Jubilith picked up a trowel and worked it experimentally in the stuff, then lifted some out and tipped it down on the unfinished top of the wall, just as she had seen Osser do so many times. She put down the trowel and chose a stone. It was heavy—much heavier than she had expected—but she made it move, made it lift, made it seat itself to suit her on

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the fresh mortar. She ticked off the excess from the join and stepped back to admire it in the fading light.

Two great clamps, hard as teeth, strong as a hurricane, caught her right thigh and her left armpit. She was swung into the air and held helpless over the unfinished parapet.

She was utterly silent, shocked past the ability even to gasp.

"I told you you were not to work here," said Osser between his teeth. So tall he was, so long were his arms as he held her high over his head, that it seemed almost as far to the parapet as it was to the ground below.

He leaned close to the edge and shook her. "I'll throw you off. This tower is mine to build, you hear?"

If she had been able to breathe, she might have screamed or pleaded with him. If she had screamed or pleaded, he might have dropped her. But her silence apparently surprised him. He grunted and set her roughly on her feet. She caught at his shoulder to keep her balance, then quickly transferred her hold to the edge of the parapet. She dropped her head between her upper arms. Her long soft hair fell forward over her face, and she moaned.

"I told you," he said, really seeing her at last. His voice shook. He stepped toward her and put out his hand. She screamed. "Be *quiet*!" he roared. A moan shut off in mid-breath. "Ah, I told you, Juby. You shouldn't have tried to build here."

He ran his great hands over the edge of the stonework, found the one she had laid, the one that had cost her such effort to lift. With one hand, he plucked it up and threw it far out into the shadows below.

"I wanted to help you with it," she whispered.

"Don't you understand?" he cried. "No one builds here who *wants* to help!"

SHE simply shook her head. She tried to breathe deeply and a long shudder possessed her. When it passed, she turned weakly and stood, her back partly arched over the edge of the parapet, her hands behind her to cushion the stone. She shook the hair out of her face; it fell away on either side like a dawnlit bow-wave. She looked up at him with an expression of such piteous confusion that his dwindling rage vanished altogether.

He dropped his eyes and shuffled one foot like a guilty child. "Juby, leave me alone."

Something almost like a smile touched her lips. She brushed her bruised arm, then walked past him to the place where the scaf-

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folding projected above the parapet.

"Not that way," he called. "Come here."

He took her hand and led her to the spiral staircase at the center of the tower. It was almost totally dark inside. It seemed like an age to her as they descended; she was alone in a black universe consisting of a rhythmic drop and turn, and a warm hard hand in hers, holding and leading her.

When they emerged, he stopped in the strange twilight, a darkness for all the world but a dazzle to them, so soaked with blackness were their eyes. She tugged gently, but he would not release her hand. She moved close to see his face. His eyes were wide and turned unseeing to the far slopes; he was frowning, yet his mouth was not fierce, but irresolute. Whatever his inward struggle was, it left his face gradually and transferred itself to his hand. Its pressure on hers became firm, hard, intense, painful.

"Osser!"

He dropped the hand and stepped back, shamed. "Juby, I will take you to . . . Juby, do you want to understand?" He waved at the tower.

She said, "Oh, yes!"

He looked at her closely, and the angry, troubled diffidence came and went. "Half a day there, half a day back again," he said.

She recognized that this was as near as this feral, unhappy man could come to asking a permission. "I'd like to understand," she said.

"If you don't, I'm going to kill you," he blurted. He turned to the west and strode off, not looking back.

Jubilith watched him go, and suddenly there was a sparkle in her wide eyes. She slipped out of her sandals, caught them up in her hand, and ran lightly and silently after him. He planted his feet strongly, like the sure, powerful teeth of the millwheel gears, and he would not look back. She sensed how immensely important it was to him not to look back. She knew that right-handed men look back over their left shoulders, so she drifted along close to him, a little behind him, a little to his right. How long, how long, until he looked to see if she was coming?

UP and up the slope, to its crest, over . . . down . . . ah! Just here, just at the last second where he could turn and look without stopping and still catch a glimpse of the tower's base, where they had stood. So he turned, and she passed around him like a windblown feather, unseen.

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And he stopped, looking back, craning. His shoulders slumped, and slowly he turned to his path again—and there was Jubilith before him.

She laughed.

His jaw dropped, and then his lips came together in a thin, angry seal. For a moment he stared at her; and suddenly, quite against his will, there burst from him a single harsh bark of laughter. She put out her hand and he came to her, took it, and they went their way together.

They came to a village when it was very late and very dark, and Osser circled it. They came to another, and Jubilith thought he would do the same, for he turned south; but when they

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came abreast of it, he struck north again.

"We'll be seen," he explained gruffly, "but we'll be seen coming from the south and leaving northward."

She would not ask where he was taking her, or why he was making these elaborate arrangements, but already she had an idea. What lay to the west was—not forbidden, exactly, but, say discouraged. It was felt that there was nothing in that country that could be of value. Anyone traveling that way would surely be remembered.

So through the village they went, and they dined quickly at an inn, and went northward, and once in the darkness, veered west again. In a wood so dark that she had taken his hand again, he stopped and built a fire. He threw down springy boughs and a thick heap of ferns, and this was her bed. He slept sitting up, his back to a tree trunk, with Jubilith between him and the fire.

Jubilith awoke twice during the long night, once to see him with his eyes closed, but feeling that he was not asleep; and once to see him with his eyes open and the dying flames flickering in the pupils, and she thought then that he was asleep, or at least not with her, but lost in the pictures the flames painted.

In the morning they moved on, gathering berries for breakfast, washing in a humorous brook.

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And during this whole journey, nothing passed between them but the small necessary phrases: "You go first here." "Look out—it drops." "Tired yet?"

For there was that about Jubilith which made explanations unnecessary. Though she did not know where they were going, or why, she understood what must be done to get them there within the framework of his desire: to go immediately, as quickly as possible, undetected by anyone else.

She did only what she could to help and did not plague him with questions which would certainly be answered in good time. So: "Here are berries." "Look, a red bird!" "Can we get through there, or shall we go around?" And nothing more.

THEY did well, the weather was fine, and by mid-morning they had reached the tumbled country of the Crooked Hills. Jubilith had seen them from afar—great broken mounds and masses against the western sky—but no one ever went there, and she knew nothing about them.

They were in open land now, and Jubilith regretted leaving the color and aliveness of the forest. The grasses here were strange, like yet unlike those near her village. They were taller, sickly, and some had odd ugly flowers. There were bald places, scored with ancient rain-gullies, as if some mighty hand had dashed acid against the soil. There were few insects and no animals that she could see, and no birds sang. It was a place of great sadness rather than terror; there was little to fear, but much to grieve for.

By noon, they faced a huge curved ridge, covered with broken stones. It looked as if the land itself had reared up and pressed back from a hidden something on the other side—something which it would not touch. Osser quickened their pace as they began to climb, although the going was hard. Jubilith realized that they were near the end of their journey, and uncomplainingly struggled along at the cruel pace he set.

At the top, they paused, giving their first attention to their wind, and gradually to the scene before them.

The ridge on which they stood was nearly circular, and perhaps a mile and a half in diameter. In its center was a small round lake with unnaturally bare shores. Mounds of rubble sloped down toward it on all sides, and farther back was broken stone.

But it was the next zone which caught and held the eye. The weed-grown wreckage there was beyond description. Great twisted

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webs and ribs of gleaming metal wove in and out of the slumped heaps of soil and masonry. Nearby, a half-acre of laminated stone stood on edge like a dinner-plate in a clay bank. What could have been a building taller than any Jubilith had ever heard about lay on its side, smashed and bulging.

Gradually she began to realize the peculiarity of this place—All the larger wreckage lay in lines directly to and from the lake in a monstrous radiation of ruin.

"What is this place?" she asked at last.

"Don't know," he grunted, and went over the edge to skip down the steep slope. When she caught up with him near the bottom, he said, "There's miles of this, west and north of here, much bigger. But this is the one we came to see. Come."

He looked to right and left as if to get his bearings, then plunged into the tough and scrubby underbrush that vainly tried to cover those tortured metal bones. She followed as closely as she could, beating at the branches which he carelessly let whip back.

Just in front of her, he turned the corner of a sharp block of stone, and when she turned it no more than a second later, he was gone.

SHE stopped, turned, turned again. Dust, weeds, lonely and sorrowful ruins. No Osser. She shrank back against the stone, her eyes wide.

The bushes nearby trembled, then lashed. Osser's head emerged. "What's the matter? Come on!" he said gruffly.

She checked an impulse to cry out and run to him, and came silently forward. Osser held the bushes briefly, and beside him she saw a black hole with broken steps leading downward.

She hesitated, but he moved his head impatiently, and she passed him and led the way downward. When he followed, his wide flat body blocked out the light. The darkness was so heavy, her eyes ached.

He prodded her in the small of the back. "Go on, go on!"

The foot of the steps came sooner than she expected and her knees buckled as she took the downward step that was not there. She tripped, almost fell, then somehow got to the side wall and braced herself there, trembling.

"Wait," he said, and the irrepressible smile quirked the corners of her mouth. As if she would go anywhere!

She heard him fumbling about somewhere, and then there was a sudden aching blaze of light that made her cry out and clap

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her hands over her face.

"Look," he said. "I want you to look at this. Hold it."

Into her hands he pressed a cylinder about half the length of her forearm. At one end was a lens from which the blue-white light was streaming.

"See this little thing here," he said, and touched a stud at the side of the cylinder. The light disappeared, came on again.

She laughed delightedly, took the cylinder and played its light around, switching it on and off. "It's wonderful!" she cried. "Oh, wonderful!"

"You take this one," he said, pleased. He handed her another torch and took the first from her. "It isn't as good, but it will help. I'll go first."

She took the second torch and tried it. It worked the same way, but the light was orange and feeble. Osser strode ahead down a slanting passageway. At first there was a great deal of rubble underfoot, but soon the way was clear as they went farther and deeper. Osser walked with confidence, and she knew he had been here before, probably many times.

"Here," he said, stopping to wait for her. His voice echoed strangely, vibrant with controlled excitement.

He turned his torch ahead, swept it back and forth.

They were at the entrance to a room. It was three times the height of a man, and as big as their village green. She stared around, awed.

"Come," Osser said again, and went to the far corner.

A massive, boxlike object stood there. One panel, about eye-level, was of a milky smooth substance, the rest of black metal. Projecting from the floor in front of it was a lever. Osser grasped it confidently and pulled. It yielded sluggishly, and returned to its original position. Osser tugged again. There was a low growling sound from the box. Osser pulled, released, pulled, released, each time a little faster. The sound rose in pitch, higher and higher.

"Turn off your light," he said.

She did so and blackness snapped in around them. As the dazzle faded from her eyes, she detected a flicker of silver light before her, and realized that it came from the milky pane in the box. As Osser pulled at the lever and the whine rose and rose in pitch, the square got bright enough for her to see her hands when she looked down at them.

And then—the pictures.

JUBILITH had never seen pictures like these. They moved, for one thing; for another, they had no color. Everything in them was black and white and shades

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of gray. Yet everything they showed seemed very real.

Not at first, for there was flickering and stopped motion, and then slow motion as Osser's lever moved faster and faster. But at last the picture steadied, and Osser kept the lever going at the same speed, flicking it with apparent ease about twice a second, while the whine inside the box settled to a steady, soft moan.

The picture showed a ball spinning against a black, light-flecked curtain. It rushed close until it filled the screen, and still closer, and Jubilith suddenly had the feeling that she was falling at tremendous velocity from an unthinkable height. Down and down the scene went, until at last the surface began to take on the qualities of a bird's-eye view. She saw a river and lakes, and a great range of hills—

And, at last, the city.

It was a city beyond fantasy, greater and more elaborate than imagination could cope with. Its towers stretched skyward to pierce the clouds themselves—some actually did. It had wide ramps on which traffic crawled, great bridges across the river, parks over which the buildings hung like mighty cliffs. Closer still the silver eye came to the scene, and she realized that the traffic was not crawling, but moving faster than a bird, faster than the wind. The vehicles were low and sleek and efficient.

And on the walks were people, and the scene wheeled and slowed and showed them. They were elaborately clothed and well-fed; they were hurried and orderly at the same time. There was a square in which perhaps a thousand of them, all dressed alike, were drawn up in lines as straight as stretched string. Even as she watched, they all began to move together, a thousand left legs coming forward, a thousand right arms swinging back.

Higher, then, and more of the city—more and more of it, until the sense of wonder filled her lungs and she hardly breathed; and still more of it, miles of it. And at last a great open space with what looked like sections of road crossing on it—but such unthinkable roads! Each was as wide as her whole village and miles long. And on these roads, great birdlike machines tilted down and touched and rolled, and swung and ran and took the air, dozens of them every minute. The scene swept close again, and it was as if she were in such a machine herself; but it did not land. It raced past the huge busy crossroads and out to a coastline.

And there were ships, ships as long as the tallest buildings were high, and clusters, dozens, hundreds of other vessels working

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and smoking and milling about in the gray water. Huge machines crouched over ships and lifted out cargoes; small, agile machines scurried about the docks and warehouses.

Then at last the scene dwindled as the magic eye rose higher and higher, faster and faster. Details disappeared, and clouds raced past and downward, and at last the scene was a disc and then a ball floating in starlit space.

OSSER let the lever go and it snapped back to its original position. The moan descended quickly in pitch, and the motion on the screen slowed, flickered, faded and went out.

Jubilith let the darkness come. Her mind spun and shook with the impact of what she had seen. Slowly she recovered herself. She became conscious of Osser's hard breathing. She turned on her dim orange torch and looked at him. He was watching her.

"What was it?" she breathed.

"What I came to show you."

She thought hard. She thought about his tower, about his refusal to let her work on it, about his cruelty to those who had. She looked at him, at the blank screen. And this was to supply the reason.

She shook her head.

He lowered himself slowly and squatted like an animal, hunched up tight, his knees in his armpits. This lifted and crooked his heavy arms. He rested their knuckles on the floor. He glowered at her and said nothing. He was waiting.

On the way here, he had said, "I'll kill you if you don't understand." But he wouldn't really, would he? Would he?

If he had towered over her, ranted and shouted, she would not have been afraid. But squatting there, waiting, silent, with his great arms bowed out like that, he was like some patient, preying beast.

She turned off the light to blot out the sight of him, and immediately became speechless with terror at the idea of his sitting there in the dark so close, waiting. She might run; she was so swift . . . but no; crouched like that, he could spring and catch her before she could tense a muscle.

Again she looked at the dead screen. "Will you . . . tell me something?" she quavered.

"I might."

"Tell me, then: When you first saw that picture, did you understand? The very first time?"

His expression did not change. But slowly he relaxed. He rocked sidewise, sat down, extended his legs. He was man again, not monster. She shuddered, then controlled it.

He said, "It took me a long

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time and many visits. I should not have asked you to understand at once."

She again accepted the timid half-step toward an apology, and was grateful.

He said, "Those were men and women just like us. Did you see that? Just like us."

"Their clothes—"

"Just like us," he insisted. "Of course they dressed differently, lived differently! In a world like that, why not? Ah, how they built, how they built!"

"Yes," she whispered. Those towers, the shining, swift vehicles, the thousand who moved like one . . . "Who were they?" she asked him.

"Don't you know? Think—think!"

"Osser, I want to understand. I truly want to!"

SHE hunted frantically for the right thing to say, the right way to catch at this elusive thing which was so frighteningly important to him. All her life she had had the answers to the questions she wanted to understand. All she had ever had to do was to close her eyes and think of the problem, and the answers soon came.

But not this problem.

"Osser," she pleaded, "where is it, the city, the great complicated city?"

"Say, 'Where was it?'" he growled.

She caught his thought and gasped. "This? These ruins, Osser?"

"Ah," he said approvingly. "It comes slowly, doesn't it? No, Juby. Not here. What was here was an outpost, a village, compared with the big city. North and west, I told you, didn't I? Miles of it. So big that . . . so big—" He extended his arms, dropped them helplessly. Suddenly he leaned close to her, began to talk fast, feverishly. "Juby, that city—that world—was built by *people*. Why did they build and why do we not? What is the difference between those people and ours?"

"They must have had . . ."

"They had nothing we don't have. They're the same kind of people; they *used* something we haven't been using. Juby, I've got that something. I can build. I can make others build."

A mental picture of the tower glimmered before her. "You built it with hate," she said wonderingly. "Is that what they had—cruelty, brutality, hatred?"

"Yes!"

"I don't believe it! I don't believe anyone could live with that much hate!"

"Perhaps not. Perhaps they didn't. But they *built* with it. They built because some men

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could flog others into building for them, building higher and faster than all the good neighbors would ever do helping one another."

"They'd hate the man who made them build like that."

Osser's hands crackled as he pressed them together. He laughed, and the echoes took everything that was unpleasant about that laughter and filled the far reaches of the dark room with it.

"They'd hate him," he agreed. "But he's strong, you see. He was strong in the first place, to make them build, and he's stronger afterward with what they built for him. Do you know the only way they can express their hatred, once they find he's too strong for them?"

Jubilith shook her head.

"They'd build," he chuckled. "They'd build higher and faster than he did. They would find the strongest man among them and *ask* him to flog them into it. That's the way a great city goes up. A strong man builds, and strong men follow, and soon the man who's strongest of all makes all the other strong ones do his work. Do you see?"

"And the . . . the others, the weak?"

"What of them?" he asked scornfully. "There are more of them than strong ones—so there are more hands to do the strong man's work. And why shouldn't they? Don't they get the city to live in when it's built? Don't they ride about in swift shining carriers and fly through the air in the bird machines?"

"Would they be—happy?" she asked.

HE looked at her in genuine puzzlement. "Happy?" He smashed a heavy fist into his palm. "They'd have a *city!*" Again the words tumbled from him: "How do you live, you and the rest of the village? What do you do when you want a—well, a garden, food from the ground?"

"I dig up the soil," she said. "I plant and water and weed."

"Suppose you want a plow?"

"I make one. Or I do work for someone who has one."

"Uh," he grunted. "And there you are, hundreds of you in the village, each one planting a little, smithing a little, thatching and cutting and building a little. Everyone does everything except for how many — four, five? — the leather-worker, old Griak who makes wooden pegs for house-beams, one or two others."

"They like to do just one work. But anyone can do any of the work. Those few, we take care of. Someone has to keep the skills alive."

He snorted. "Put a strong man in the village and give him strong

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men to do what he wants. Get ten villagers at once and make them all plant at once. You'll have food then for fifty, not ten!"

"But it would go to waste!"

"It would not, because it would all belong to the head man. He would give it away as he saw fit —a lot to those who obeyed him, nothing to those who didn't. What was left over he could keep for himself, and barter it out to keep building. Soon he would have the biggest house and the best animals and the finest women, and the more he got, the stronger he would be. And a city would grow—a *city!* And the strong man would give everyone better things if they worked hard, and protect them."

"Protect them? Against what?"

"Against the other strong ones. There would be others."

"And you—"

"I shall be the strongest of all," he said proudly. He waved at the box. "We were a great people once. We're ants now—less than ants, for at least the ants work together for a common purpose. I'll make us great again." His head sank onto his hand and he looked somberly into the shadows. "Something happened to this world. Something smashed the cities and the people and drove them down to what they are today. Something was broken within them, and they no longer dared to be great. Well, they will be. *I* have the extra something that was smashed out of them."

"What smashed them, Osser?"

"Who can know? I don't. I don't care, either." He tapped her with a long forefinger to emphasize. "All I care about is this: They were smashed because they were not strong enough. I shall be so strong I can't be smashed."

She said, "A stomach can hold only so much. A man asleep takes just so much space. So much and no more clothing makes one comfortable. Why do you want more than these things, Osser?"

She knew he was annoyed, and knew, too, that he was considering the question as honestly as he could.

"It's because I . . . I want to be strong," he said in a strained voice.

"You *are* strong."

"Who knows that?" he raged, and the echoes giggled and whispered.

"I do. Wrenn. Sussten. The whole village."

"The whole world will know. They will all do things for me."

She thought, But everyone does everything for himself, all over the world. Except, she added, those who aren't able . . .

With that in mind, she looked at him, his oaken shoulders, his

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powerful, bitter mouth. She touched the bruises his hands had left, and the beginnings of the understanding she had been groping for left her completely.

She said dully, "Your tower . . . you'd better get back there."

"Work goes on," he said, smiling tightly, "whether I'm there or not, as long as they don't know my plans. They are afraid. But—yes, we can go now."

RISING, he flicked the stud of his torch. It flared blue-white, faded to the weak orange of Jubilith's, then died.

"The light . . ."

"It's all right," said Jubilith. "I have mine."

"When they get like that, so dim, you can't tell when they'll go out. Come—hurry! This place is full of corridors; without light, we could be lost here for days.'"

She glanced around at the crowding shadows. "Make it work again," she suggested.

He looked at the dead torch in his hand. "You," he said flatly. He tossed it. She caught it in her free hand, put her torch on the floor, and held the broken one down so she could see it in the waning orange glow. She turned it over twice, her sensitive hands feeling with every part rather than with fingertips alone. She held it still and closed her eyes; and then it came to her, and she grasped one end with her right hand and the other with her left, and twisted.

There was a faint click and the outer shell of the torch separated. She drew off the butt end of it; it was just a hollow shell. The entire mechanism was attached to the lens end and was now exposed.

She turned it over carefully, keeping her fingers away from the workings. Again she closed her eyes and thought, and at last she bent close and peered. She nodded, fumbled in her hair, and detached a copper clasp. She bent and broke off a narrow strip of it and inserted it carefully into the light mechanism. Very carefully, she pried apart two small strands of wire, dipped a little deeper, hooked onto a tiny white sphere, and drew it out.

"Poor thing," she murmured under her breath.

"Poor what?"

"Spider's egg," she said ruefully. "They fight so to save them; and this one will never hatch out now. It's been burned."

She picked up the butt-end housing, slipped the two parts together, and twisted them until they clicked. She handed the torch to Osser.

"You've wasted time," he complained, surly.

"No, I haven't," she said. "We'll have light now."

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He touched the stud on the torch. The brilliant, comforting, white light poured from it.

"Yes," he admitted quietly.

Watching his face as he handled the torch, she knew that if she could read what was in his mind in that second, she would have the answer to everything about him. She could not, however, and he said nothing, but led across the room to the dark corridor.

He was silent all the way back to the broken steps.

They stood halfway up, letting their eyes adjust to the daylight which poured down on them, and he said, "You didn't even try the torch to see if it would work, after you took out that egg."

"I knew it would work." She looked at him, amazed. "You're angry."

"Yes," he said.

He took her torch and his and put them away in a niche in the ruined stair-well, and they climbed up into the noon light. It was all but intolerable, as the two suns were all but in syzygy, the blue-white midget shining through the great pale gaseous mass of the giant, so that together they cast only a single shadow.

"It will be hot this afternoon," she said, but he was silent, steeped in some bitterness of his own, so she followed him quietly without attempting conversation.

OLD Oyva stirred sleepily in her basking chair, and suddenly sat upright.

Jubilith approached her, pale and straight. "Is it Oyva?"

"It is, Jubilith," said the old woman. "I knew you would be back, my dear. I'm sore in my heart with you."

"Is he here?"

"He is. He has been on a journey. You'll find him tired."

"He should have been here, with all that has happened," said Jubilith.

"He should have done exactly as he has done," Oyva stated bluntly.

Jubilith recognized the enormity of her rudeness, and the taste of it was bad in her mouth. One did not criticize Wrenn's comings and goings.

She faced Oyva and closed her eyes humbly.

Oyva touched her. "It's all right, child. You are distressed. Wrenn!" she called. "She is here!"

"Come, Jubilith," Wrenn's voice called from the house.

"He knows? *No* one knew I was coming here!"

"He knows," said Oyva. "Go to him, child."

Jubilith entered the house. Wrenn sat in his corner. The musical instrument was nowhere in sight. Aside from his cushions, there was nothing in the room.

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Wrenn gave her his wise, sweet smile. "Jubilith," he said. "Come close." He looked drawn and pale, but quite untroubled. He put a cushion by him and she crossed slowly and sank down on it.

He was quiet, and when she was sure it was because he waited for her to speak, she said, "Some things may not be understood."

"True," he agreed.

She kneaded her hands. "Is there never a change?"

"Always," he said, "when it's time."

"Osser—"

"Everyone will understand Osser very soon now."

She screwed up her courage. "Soon is not soon enough. I must know him now."

"Before anyone else?" he inquired mildly.

"Let everyone know now," she suggested.

He shook his head and there was no appeal in it.

"Then let me. I shall be a part of you and speak of it only to you."

"Why must you understand?"

SHE shuddered. It was not cold, or fear, but simply the surgings of a great emotion.

"I love him," she said. "And to love is to guard and protect. He needs me."

"Go to him then." But she sat where she was, her long eyes cast down, weeping. Wrenn said, "There is more, then?"

"I love . . ." She threw out an arm in a gesture which enfolded Wrenn, the house, the village. "I love the people, too, the gardens, the little houses; the way we go and come, and sing, and make music, and make our own tools and clothes. To love is to guard and protect . . . and I love these things, and I love Osser. I can destroy Osser, because he would not expect it of me; and, if I did, I would protect all of you. But if I protect him, he will destroy you. There is no answer to such a problem, Wrenn; it is a road," she cried, "with a precipice at each end, and no standing still!"

"And understanding him would be an answer?"

"There's no other!" She turned her face up to him, imploring. "Osser is strong, Wrenn, with a —a new thing about him, a thing none of the rest of us have. He has told me of it. It is a thing that can change us, make us part of him. He will build cities with our hands, on our broken bodies if we resist him. He wants us to be a great people again—he says we were, once, and have lost it all."

"And do you regard that as greatness, Jubilith—the towers, the bird-machines?"

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"How did you know of them? . . . Greatness? I don't know, I don't know," she said, and wept. "I love him, and he wants to build a city with a wanting greater than anything I have ever known or heard of before. Could he do it, Wrenn? Could he?"

"He might," said Wrenn calmly.

"He is in the village now. He has about him the ones who built his tower for him. They cringe around him, hating to be near and afraid to leave. He sent them one by one to tell all the people to come out to the foothills tomorrow, to begin work on his city. He wants enough building done in one hundred days to shelter everyone, because then, he says, he is going to burn this village to the ground. Why, Wrenn—why?"

"Perhaps," said Wrenn, "so that we may all face his strength and yield to it. A man who could move a whole village in a hundred days just to show his strength would be a strong man indeed."

"What shall we do?"

"I think we shall go out to the foothills in the morning and begin to build."

She rose and went to the door.

"I know what to do now," she whispered. "I won't try to understand any more. I shall just go and help him."

"Yes, go," said Wrenn. "He will need you."

JUBILITH stood with Osser on the parapet, and with him stared into the dappled dawn. The whole sky flamed with the loom of the red sun's light, but the white one preceded it up the sky, laying sharp shadows in the soft blunt ones. Birds called and chattered in the Sky-tree Grove, and deep in the thickets the seven-foot bats grunted as they settled in to sleep.

"Suppose they don't come?" she asked.

"They'll come," he said grimly. "Jubilith, why are you here?"

She said, "I don't know what you are doing, Osser. I don't know whether it's right or whether you will keep on succeeding. I do know there will be pain and difficulty and I—I came to keep you safe, if I could . . . I love you."

He looked down at her, as thick and dark over her as his tower was over the foothills. One side of his mouth twitched.

"Little butterfly," he said softly, "do you think *you* can guard *me*?"

Everything beautiful about her poured out to him through her beautiful face, and for a moment his world had three suns instead of two. He put his arms around her. Then his great voice explod-

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ed with two syllables of a mighty laugh. He lifted her and swung her behind him, and leaped to the parapet.

Deeply shaken, she came to follow his gaze.

The red sun's foggy limb was above the townward horizon, and silhouetted against it came the van of a procession. On they came and on, the young men of the village, the fathers. Women were with them, too, and everything on wheels that the village possessed—flat-bed wagons, two-wheeled rickshaw carts, children's and vendors' and pleasure vehicles. A snorting team of four tiger-oxen clawed along before a heavily laden stone-boat, and men shared packs that swung in the center of long poles.

Osser curled his lip. "You see them," he said, as if to himself, "doing the only thing they can think of. Push them, they yield. The clods!" he spat. "Well, one day, one will push back. And when he does, I'll break him, and after that I'll use him. Meantime —I have a thousand hands and a single mind. We'll see building now," he crooned. "When they've built, they'll know what they don't know now—that they're men."

"They've all come," breathed Jubilith. "All of them. Osser—"

"Be quiet," he said, leaning into the wind to watch, gloating. With the feel of his hard hands still on her back, she discovered with a crushing impact that there was no room in his heart for her when he thought of his building. And she knew that there never would be, except perhaps for a stolen moment, a touch in passing. With the pain of that realization came the certainty that she would stay with him always, even for so little.

The procession dipped out of sight, then slowly rose over and down the near hill and approached the tower. It spread and thickened at the foot of the slope, as men cast about, testing the ground with their picks, eying the land for its color and vegetation and drainage . . . or was that what they were doing?

OSSER leaned his elbows on the parapet and shook his head pityingly at their inefficiency. Look at the way they went about laying out houses! And their own houses. Well, he'd let them mill about until they were completely confused, and then he'd go down and make them do it his way. Confused men are soft men; men working against their inner selves are easy to divert from outside.

Beside him, Jubilith gasped.

"What is it?"

She pointed. "There—sending the men to this side, that side.

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See, by the stone-boat? It's Wrenn!"

"Nonsense!" said Osser. "He'd never leave his house. Not to walk around among people who are sweating. He deals only with people who tell him he's right before he speaks."

"It's Wrenn, it is, it is!" cried Jubilith. She clutched his arm. "Osser, I'm afraid!"

"Afraid? Afraid of what? . . . By the dying Red One, it *is* Wrenn, telling men what to do as if this was *his* city." He laughed. "There are few enough here who are strong, Juby, but he's the strongest there is. And look at him scurry around for me!"

"I'm afraid," Jubilith whimpered.

"They jump when he tells them," said Osser reflectively, shading his eyes. "Perhaps I was wrong to let them tire themselves out before I help them do things right. With a man like him to push them . . . Hm. I think we'll get it done right the first time."

He pushed himself away from the parapet and swung to the stairway.

"Osser, don't, please don't!" she begged.

He stopped just long enough to give her a glance like a stone thrown. "You'll never change my mind, Juby, and you'll be hurt if you try too often." He dropped into the opening, went down three steps, five steps . . .

He grunted, stopped.

Jubilith came slowly over to the stairwell. Osser stood on the sixth step, on tiptoe. Impossibly on tiptoe: the points of his sandals barely touched the step at all.

He set his jaw and placed his massive hands one on each side of the curved wall. He pressed them out and up, forcing himself downward. His sandals touched more firmly; his toes bent, his heels made contact. His face became deep red, and the cords at the sides of his neck ridged like a weathered fallow-field.

A strained crackle came from his shoulders, and then the pent breath burst from him. His hands slipped, and he came up again just the height of the single stair-riser, to bob ludicrously like a boat at anchor, his pointed toe touching and lifting from the sixth step.

He gave an inarticulate roar, bent double, and plunged his hands downward as if to dive head-first down the stairs. His wrists turned under and he yelped with the pain. More cautiously he felt around and down, from wall to wall. It was as if the air in the stairway had solidified, become at once viscous and resilient. Whatever was there was invisible and completely impassable.

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HE backed slowly up the steps. On his face there was fury and frustration, hurt and a shaking reaction.

Jubilith wrung her hands. "Please, please, Osser, be care—"

The sound of her voice gave him something to strike out at, and he spun about, raising his great bludgeon of a fist. Jubilith stood frozen, too shocked to dodge the blow.

"*Osser!*"

Osser stopped, tensed high, fist up, like some terrifying monument to vengeance. The voice had been Wrenn's—Wrenn speaking quietly, even conversationally, but magnified beyond belief. The echoes of it rolled off and were lost in the hills.

"*Come watch men building, Osser!*"

Dazed, Osser lowered his arm and went to the parapet.

Far below, near the base of the hill, Wrenn stood, looking up at the tower. When Osser appeared, Wrenn turned his back and signaled the men by the stone-boat. They twitched away the tarpaulin that covered its load.

Osser's hands gripped the stone as if they would powder it. His eyes slowly widened and his jaw slowly dropped.

At first it seemed like a mound of silver on the rude platform of the ox-drawn stone-boat. Gradually he perceived that it was a machine, a machine so finished, so clean-lined and so business-like that the pictures he had shown Jubilith were clumsy toys in comparison.

It was Sussten, a man Osser had crushed to the ground with two heavy blows, who sprang lightly up on the machine and settled into it. It backed off the platform, and Osser could hear the faintest of whines from it. The machine rolled and yet it stepped; it kept itself horizon-level as it ran, its long endless treads dipping and rising with the terrain, its sleek body moving smooth as a swan. It stopped and then went forward, out to the first of a field of stakes that a crew had been driving.

The flat, gleaming sides of the machine opened away and forward and locked, and became a single blade twice the width of the machine. It dropped until its sharp lower edge just touched the ground, checked for a moment, and then sank into the soil.

Dirt mounded up before it until flakes fell back over the wide moldboard. The machine slid ahead, and dirt ran off the sides of the blade to make two straight windrows. And behind the machine as it labored, the ground was flat and smooth; and it was done as easily as a smoothing hand in a sandbox. Here it

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was cut and there it was filled, but everywhere the swath was like planed wood, all done just as fast as a man can run.

Osser made a sick noise far back in his tight throat.

GUIDED by the stakes, the machine wheeled and returned, one end of the blade now curved forward to catch up the windrow and carry it across the new parallel cut. And now the planed soil was twice as wide.

As it worked, men worked, and Osser saw that, shockingly, they moved with no less efficiency and certainty than the machine. For Osser, these men had plodded and sweated, drudged, each a single, obstinate unit to be flogged and pressed. But now they sprinted, sprang; they held, drove, measured and carried as if to swift and intricate music.

A cart clattered up and from it men took metal spikes, as thick as a leg, twice as tall as a man. Four men to a spike, they ran with them to staked positions on the new-cut ground, set them upright. A man flung a metal clamp around the spike. Two men, one on each side, drove down on the clamp with heavy sledges until the spike would stand alone. And already those four were back with another spike.

Twenty-six such spikes were set, but long before they were all out of the wagon, Sussten spun the machine in its own length and stopped. The moldboard rose, hinged, folded back to become the silver sides of the machine again. Sussten drove forward, nosed the machine into the first of the spikes, which fitted into a slot at the front of the machine. There was the sound of a frantic giant ringing a metal triangle, and the spike sank as if the ground had turned to bread.

Leaving perhaps two hand's-breadths of the spike showing, the machine slid to the next and the next, sinking the spikes so quickly that it had almost a whole minute to wait while the spike crew set the very last one. At that a sound rolled out of the crowd, a sound utterly unlike any that had ever been heard during the building of the tower —a friendly, jeering roar of laughter at the crew who had made the machine wait.

Men unrolled heavy cable along the lines of spikes; others followed right behind them, one with a tool which stretched the cable taut, two with a tool that in two swift motions connected the cable to the tops of the sunken spikes. And by the time the cable was connected, two flatbeds, a buckboard and a hay wagon had unloaded a cluster of glistening machine parts. Men

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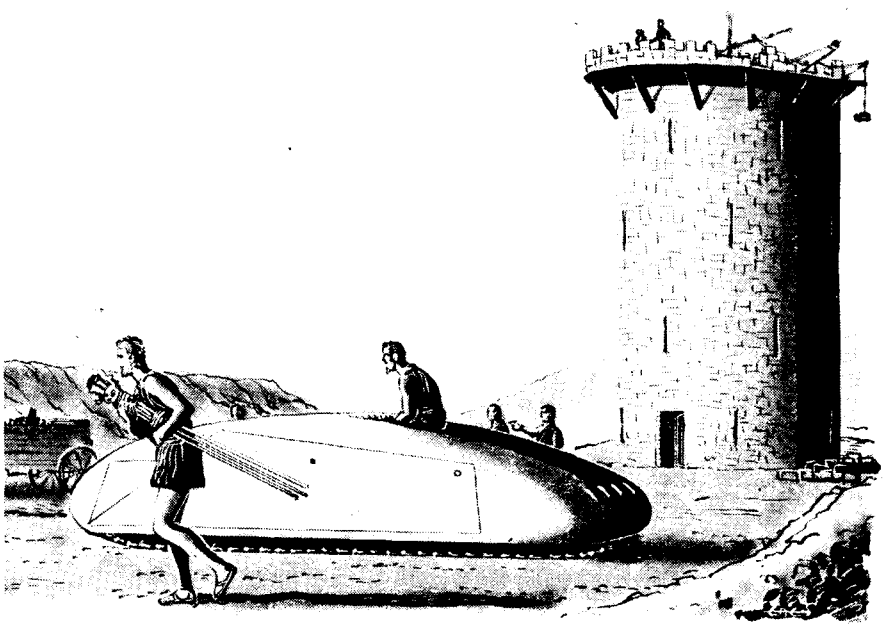
and women swarmed over them, wrenches, pliers and special tools in hand, bolting, fitting, clamping, connecting. Three heavy leads from the great ground cable were connected; a great parabolic wire basket was raised and guyed.

Wrenn ran to the structure and pulled a lever. A high-pitched scream of force dropped sickeningly in pitch to a jarring subsonic, and rose immediately high out of the audible range.

A rosy haze enveloped the end of the new machine, opposite the ground array and under the basket. It thickened, shimmered, and steadied, until it was a stable glowing sphere with an off-focus muzziness barely showing all around its profile.

THE crowd—not a group now, but a line—cheered and the line moved forward. Every conceivable village conveyance moved in single file toward the shining sphere, and, as each stopped, heavy metal was unloaded. Cast-iron stove legs could be recognized, and long strips of tinning solder, a bell, a kettle, the framing of a bench. The blacksmith's anvil was there, and parts of his forge. Pots and skillets. A ratchet and pawl from



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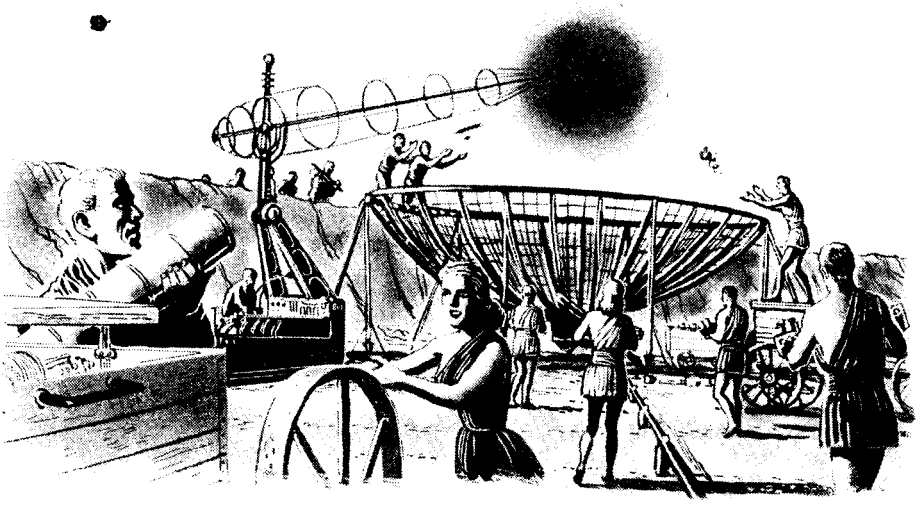
the gristmill. The weights and pendulum from the big village clock.

As each scrap was unloaded, exactly the number of hands demanded by its weight were waiting to catch it, swing it from its conveyance into the strange sphere. They went in without resistance and without sound, and they did not come out. Wagon after wagon, pack after handsack were unloaded, and still the sphere took and took.

It took heavy metal of more mass than its own dimensions. Had the metal been melted down into a sphere, it would have been a third again, half again, twice as large as the sphere, and still it took.

But its color was changing. The orange went to burned sienna and then to a strident brown. Imperceptibly this darkened until at last it was black. For a moment, it was a black of impossible glossiness, but this softened. Blacker and blacker it became, and at length it was not a good thing to look into—the blackness seemed to be hungry for something more intimate than metal. And still the metals came and the sphere took.

A great roar came from the



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crowd; men fell back to look upward. High in the west was a glowing golden spark which showed a long blue tail. It raced across the sky and was gone, and moments later the human roar was answered by thunder from above.

If the work had been swift before, it now became a blur. Men no longer waited for the line of wagons to move, but ran back along it to snatch metal and stagger forward again to the sphere. Women ripped off bracelets and hammered earrings and threw them to the implacable melanosphere. Men threw in their knives, even their buttons. A rain of metal was sucked silently into the dazzling black.

Another cry from the crowd, and now there was hurried anguish in it; again the craning necks, the quick gasp. The golden spark was a speed-blurred ovoid now, the blue tail a banner half a horizon long. The roar, when it came, was a smashing thunder, and the blue band hung where it was long after the thing had gone.

A moan of urgency, caught and maintained by one exhausted throat after another, rose and fell and would not leave. Then it was a happy shout as Sussten drove in, shouldering the beautiful cutting machine through the scattering crowd. Its blade unfolded as it ran, latched high and stayed there like a shining forearm flung across the machine's silver face.

As the last scrambling people dove for safety, Sussten brought the huge blade slashing downward and at the same time threw the machine into its highest speed. It leaped forward as Sussten leaped back. Unmanned, it rushed at the sphere as if to sweep it away, crash the structure that contained it. But at the last micro-second, the blade struck the ground; the nose of the machine snapped upward, and the whole gleaming thing literally vaulted into the sphere.

NO words exist for such a black. Some people fell to their knees, their faces covered. Some turned blindly away, unsteady on their feet. Some stood trembling, fixed on it, until friendly hands took and turned them and coaxed them back to reality.

And at last a man staggered close, squinting, and threw in the heavy wrought-iron support for an inn sign—

And the sphere refused it.

Such a cry of joy rose from the village that the sleeping bats in the thickets of Sky-tree Grove, two miles away, stirred and added their porcine grunting to the noise.

A woman ran to Wrenn, screaming, elbowing, unnoticed

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and unheard in the bedlam. She caught his shoulder roughly, spun him half around, pointed. Pointed up at the tower, at Osser.

Wrenn thumbed a small disc out of a socket in his belt and held it near his lips.

"*Osser!*" The great voice rang and echoed, crushing the ecstatic noises of the people by its sheer weight. "*Osser, come down or you're a dead man!*"

The people, suddenly silent, all stared at the tower. One or two cried, "Yes, come down, come down . . ." but the puniness of their voices was ludicrous after Wrenn's magnified tones, and few tried again.

Osser stood holding the parapet, legs wide apart, eyes wide—too wide—open. His hands curled over the edge, and blood dripped slowly from under the cuticles.

"*Come down, come down . . .*"

He did not move. His eyeballs were nearly dry, and unnoticed saliva lay in a drying streak from one corner of his mouth.

"*Jubilith, bring him down!*"

She was whimpering, begging, murmuring little urgencies to him. His biceps were as hard as the parapet, his face as changeless as the stone.

"*Jubilith, leave him! Leave him and come!*" Wrenn, wise Wrenn, sure, unshakable, imperturbable Wrenn had a sob in his voice; and under such amplification the sob was almost big enough to be voice for the sobs that twisted through Jubilith's tight throat.

She dropped to one knee and put one slim firm shoulder under Osser's wrist. She drove upward against it with all the lithe strength of her panicked body. It came free, leaving a clot of fingertip on the stone. Down she went again, and up again at the other wrist; but this was suddenly flaccid, and her tremendous effort turned to a leap. She clutched at Osser, who tottered forward.

For one endless second they hung there, while their mutual center of gravity made a slow deliberation, and then Jubilith kicked frantically at the parapet, abrading her legs, mingling her blood with his on the masonry. They went together back to the roof. Jubilith twisted like a falling cat and got her feet down, holding Osser's great weight up.

They spun across the roof in an insane staggering dance; then there was the stairway (with its invisible barrier gone) and darkness (with his hand in hers now, holding and leading) and a sprint into daylight and the shattering roar of Wrenn's giant voice: "*Everybody down, down flat!*"

And there was a time of running, pulling Osser after her, and

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Osser pounding along behind her, docile and wide-eyed as a cat-ox. And then the rebellion and failure of her legs, and the will that refused to let them fail, and the failure of that will; the stunning agony of a cracked patella as she went down on the rocks, and the swift sense of infinite loss as Osser's hand pulled free of hers and he went lumbering blindly along, the only man on his feet in the wide meadow of the fallen.

Jubilith screamed and someone stood up—she thought it was old Oyva—and cried out.

Then the mighty voice again, "*Osser! Down, man!*" Blearily, then, she saw Osser stagger to a halt and peer around him.

"*Osser, lie down!*"

AND then Osser, mad, drooling, turning toward her. His eyes protruded and he slashed about with his heavy fists. He came closer, unseeing, battling some horror he believed in with great cuts and slashes that threatened elbow and shoulder joints by the wrenching of their unimpeded force.

His voice—but not his, rather the voice of an old, wretched crone—squeaking out in a shrill falsetto, "Not down, never down, but up. I'll build, build, build, break to build, kill to build, and all the ones who can do everything, anything, everything, they will build everything for me. I'm strong!" he shrieked, soprano. "All the people who can do anything are less than one strong man . . ."

He jabbered and fought, and suddenly Wrenn rose, quite close by, his left hand enclosed in a round flat box. He moved something on its surface and then waved it at Osser, in a gesture precisely like the command to a guest to be seated.

Down went Osser, close to Jubilith, with his face in the dirt and his eyes open, uncaring. On him and on Jubilith lay the invisible weight of the force that had awaited him in the stairway.

The breath hissed out of Jubilith. Had she not been lying on her side with her face turned skyward in a single convulsive effort toward air, she would never have seen what happened. The golden shape appeared in the west, seen a fraction of a second, but blazoned forever in tangled memories of this day. And simultaneously the earth-shaking cough of the machine as its sphere disappeared.

She could not see it move, but such a blackness is indelible, and she sensed it when it appeared in the high distances as its trajectory and that of the golden flyer intersected.

Then there was—*Nothing.*

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THE broad blue trail swept from the western horizon to the zenith, and sharply ended. There was no sound, no concussion, no blaze of light. The sphere met the ship and both ceased to exist.

Then there was the wind, from nowhere, from everywhere, all the wind that ever was, tearing in agony from everywhere in the world to the place where the sphere had been, trying to fill the strange space that had contained exactly as much matter as the dead golden ship. Wagons, oxen, trees and stones scraped and flew and crashed together in the center of that monstrous implosion.

The weight Wrenn had laid on Jubilith disappeared, but her sucking lungs could find nothing to draw in. There was air aplenty, but none of it would serve her.

Finally she realized that there was unconsciousness waiting for her if she wanted it. She embraced it, sank into it, and left the world to its wailing winds.

Ages later, there was weeping.

She stirred and raised her head.

The sphere machine was gone. There was a heap of something down there, but it supported such a tall and heavy pillar of roiling dust that she could not see what it was. There, and there, and over yonder, in twos and threes, silent, shaken people sat up, some staring about them, some just sitting, waiting for the shock-stopped currents of life to flow back in.

But the weeping . . .

She put her palm on the ground and inched it, heel first, in a weak series of little hops, until she was half sitting.

Osser was weeping.

He sat upright, his feet together and his knees wide apart, like a little child. He rocked. He lifted his hands and let them fall, lifted them and punctuated his crying with weak poundings on the ground. His mouth was an *O*, his eyes were single squeezed lines, his face was wet, and his crying was the most heartrending sound she had ever heard.

She thought to speak to him, but knew he would not hear. She thought to go to him, but the first shift of weight sent such agony through her broken kneecap that she almost fainted.

Osser wept.

She turned away from him—suppose, later, he should remember that she had seen this?—and then she knew why he was crying. He was crying because his tower was gone. Tower of strength, tower of defiance, tower of hope, tower of rebellion and hatred and an ambition big enough for a whole race of city-builders, gone without a fight, gone without the triumph of tak-

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ing him with it, gone in an instant, literally in a puff of wind.

"Where does it hurt?"

It was Wrenn, who had approached unseen through the blinding, sick compassion that filled her.

"It hurts there." She pointed briefly at Osser.

"I know," said Wrenn gently. He checked what she was about to say with a gesture. "No, we won't stop him. When he was a little boy, he never cried. He has been hurt more than most people, and nothing ever made him cry, ever. We all have a cup for tears and a reservoir. No childhood is finished until all the tears flow from the reservoir into the cup. Let him cry; perhaps he is going to be a man. It's your knee, isn't it?"

"Yes. Oh, but I can't stand to hear it, my heart will burst!" she cried.

"Hear him out," said Wrenn softly, taking medication from a flat box at his waist. He ran feather-fingers over her knee and nodded. "You have taken Osser as your own. Keep this weeping with you, all of it. It will fit you to him better through the healing time."

"May I understand now?"

"Yes, oh yes . . . and since he has taught you about hate, you will hate me for it."

"I couldn't hate you, Wrenn."

Something stirred within his placid eyes—a smile, a pointed shard of knowledge—she was not sure. "Perhaps you could."

HE kept his eyes on his careful bandaging, and as he worked, he spoke.

"Stop a man in his work to tell him that each of his fingers bears a pattern of loops and whorls, and you waste his time. It is a thing he knows, a thing he has seen for himself, a thing which can be checked on the instant—in short, an obvious, unremarkable thing. Yet, if his attention is not called to it, it is impossible to teach him that these patterns are exclusive, original with him, unduplicated anywhere. Sparing him the truism may cost him the fact.

"It is that kind of truism through which I shall pass to reach the things you must understand. So be patient with me through the familiar paths; I promise you a most remarkable turning.

"We are an ancient and resourceful species, and among the many things we have—our happiness, our simplicity, our harmony with each other and with ourselves—some are the products of intelligence, per se, but most of the good things spring from a quality which we possess in greater degree than any other species

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yet known. That is—logic.

"Now, there is the obvious logic: you may never have broken your knee before, but you knew, in advance, that if you did it would cause you pain. If I hold this pebble so, you may correctly predict that it will drop when I release it, though you have never seen this stone before. This obvious logic strikes deeper levels as well; for example, if I release the stone and it does not fall, logic tells you not only that some unpredicted force is now acting on it, but a great many things about that force: that it equals gravity in the case of this particular pebble; that it is in stasis; that it is phenomenal, since it is out of the statistical order of things.

"The quality of logic, which we (so far as is known) uniquely possess, is this: any of us can do literally anything that anyone else can do. You need ask no one to solve the problems that you face every day, providing they are problems common to all. To cut material so that a sleeve will fit a shoulder, you pause, you close your eyes; the way to cut the material then comes to you, and you proceed. You never need do anything twice, because the first way is the most logical. You may finish the garment and put it away without trying it on for fit, because you know you have done it right and it is perfect.

"If I put you before a machine which you had never seen before, which had a function unknown to you, and which operated on principles you had never heard of, and if I told you it was broken and needed repairing, you would look at it carefully, inside, outside, top and bottom, and you would close your eyes, and suddenly you would understand the principles. With these and the machine, function would explain itself. The step from that point to the location of a faulty part is self-evident.

"Now I lay before you parts which are identical in appearance, and ask you to install the correct one. Since you thoroughly understand the requirements now, the specifications for the correct part are self-evident. Logic dictates the correct tests for the parts. You will rapidly reject the tight one, the heavy one, the too soft one, and the too resilient one, and you will repair my machine. And you will walk away without testing it, since you now know it will operate."

WRENN continued, "You—all of us—live in this way. We build no cities because we don't need cities. We stay in groups because some things need more than two hands, more than one head, or voice, or mood. We

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eat exactly what we require, we use only what we need.

"And that is the end of the truism, wherein I so meticulously describe to you what you know about how you live. The turning: Whence this familiar phenomenon, this closing of the eyes and mysterious appearance of the answer? There have been many engrossing theories about it, but the truth is the most fascinating of all.

"We have all spoken of telepathy, and many of us have experienced it. We cannot explain it, as yet. But most of us insist on a limited consideration of it; that is, we judge its success or failure by the amount of detail sent and received. We expect *facts* to be transmitted, *words*, idea sequences—or perhaps pictures; the clearer the picture, the better the telepathy.

"Perhaps one day we will learn to do this; it would be diverting. But what we actually *do* is infinitely more useful.

"You see; we *are* telepathic, not in the way of conveying details, but in the much more useful way of conveying *a manner of thinking*.

"Let us try to envisage a man who lacks this quality. Faced with your broken machine, he would be utterly at a loss, unless he had been specially trained in this particular field. Do not overlook the fact that he lacks the conditioning of a whole life of the kind of sequence thinking which is possible to us. He would probably bumble through the whole chore in an interminable time, trying one thing and then another and going forward from whatever seems to work. You can see the tragic series of pitfalls possible for him in a situation in which an alternate three or four or five consecutive steps are possible, forcing step six, which is wrong in terms of the problem.

"Now, take the same man and train him in this one job. Add a talent, so that he learns quickly and well. Add years of experience—terrible, drudging thought! —to his skill. Face him with the repair problem and it is obvious that he will repair it with a minimum of motion.

"Finally, take this skilled man and equip him with a device which constantly sends out the habit-patterns of his thinking. Long practice has made him efficient in the matter; in terms of machine function he knows better than to question whether a part turns this way or that, whether a rod or tube larger than x diameter is to be considered. Furthermore, imagine a receiving device which absorbs these sendings whenever the receiver is faced with an identical problem. The skilled sender controls the

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unskilled receiver as long as the receiver is engaged in the problem. Anything the receiver does which is counter to the basic patterns of the sender is automatically rejected as illogical.

"And now I have described our species. We have an unmatchable unitary existence. Each of us with a natural bent—the poets, the musicians, the mechanics, the philosophers—each gives of his basic thinking method every time anyone has an application for it. The expert is unaware of being tapped—which is why it has taken hundreds of centuries to recognize the method. Yet, in spite of what amounts to a veritable race intellect, we are all very much individuals. Because each field has many experts, and each of those experts has his individual approach, only that which is closest both to the receiver *and* his problem comes in. The ones without special talents live fully and richly with all the skills of the gifted. The creative ones share with others in their field as soon as it occurs to any expert to review what he knows; the one step forward then instantly presents itself.

"So much for the bulk of our kind. There remain a few specializing *non*-specialists. When you are faced with a problem to which no logical solution presents itself, you come to one of these few for help. The reason no solution presents itself is that this is a new line of thinking, or (which is very unlikely) the last expert in it has died. The non-specialist hears your problem and applies simple logic to it. Immediately, others of his kind do the same. But, since they come from widely divergent backgrounds and use a vast variety of methods, one of them is almost certain to find the logical solution. This is your answer—and through you, it is available to anyone who ever faces this particular problem.

"In exceptional cases, the non-specializing specialist encounters a problem which, for good reason, is better left out of the racial 'pool'—as, for example, a physical or psychological experiment within the culture, of long duration, which general knowledge might alter. In such cases, a highly specialized hypnotic technique is used on the investigators, which has the effect of cloaking thought on this particular matter.

"And if you began to fear that I was never coming to Osser's unhappy history, you must understand, my dear, I have just given it to you. Osser was just such an experiment.

"It became desirable to study the probable habit patterns of a species like us in every respect except for our unique attribute. The problem was attacked from

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many angles, but I must confess that using a live specimen was my idea.

"By deep hypnosis, the telepathic receptors in Osser were severed from the rest of his mind. He was then allowed to grow up among us in real and complete freedom.

"You saw the result. Since few people recognize the nature of this unique talent, and even fewer regard it as worth discussion, this strong, proud, highly intelligent boy grew up feeling a hopeless inferior, and never knowing exactly why. Others did things, made things, solved problems, as easily as thinking about them, while Osser had to study and sweat and piece and try out. He had to assert his superiority in some way. He did, but in as slipshod a fashion as he did everything else.

"So he was led to the pictures you saw. He was permitted to make what conclusions he wished —they were that we are a backward people, incapable of building a city. He suddenly saw in the dreams of a mechanized, star-reaching species a justification of himself. He could not understand our lack of desire for possessions, not knowing that our whole cultural existence is based on sharing —that it is not only undesirable, but impossible for us to hoard an advanced idea, a new comfort. He would master us through strength.

"He was just starting when you came to me about him. You could get no key to his problem because we know nothing about sick minds, and there was no expert you could tap. I couldn't help you—you, of all people—because you loved him, and because we dared not risk having him know what he was, especially when he was just about to take action.

"Why he chose this particular site for his tower I do not know. And why he chose the method of the tower I don't know either, though I can deduce an excellent reason. First, he had to use his strength once he became convinced that in it lay his superiority. Second, he had to *try out* this build-with-hate idea—the bugaboo of all other man-species, the trial-and-error, the inability to *know* what will work and what will not.

"And so we learned through Osser precisely what we had learned in other approaches—that a man without our particular ability must not live among us, for, if he does, he will destroy us.

"It is a small step from that to a conclusion about a whole race of them coexisting with us. And now you know what happened here this afternoon."

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JUBILITH raised her head slowly. "A whole ship full of . . . of what Osser was?"

"Yes. We did the only thing we could. Quick, quite painless. We have been watching them for a long time—years. We saw them start. We computed their orbit—even to the deceleration spiral. We chose a spot to launch our interceptor." He glanced at Osser, who was almost quiet, quite exhausted. "What sheer hell he must have gone through, to see us build like that. How could he know that not one of us needed training, explanation, or any but the simplest orders? How could he rationalize to himself our possession of machines and devices surpassing the wildest dreams of the godlike men he admired so? How could he understand that, having such things, we use them only when we must, and that otherwise we live in ways which will not violate the walking, working animal we are?"

She turned to him a mask so cold, so beautiful, he forgot for a moment to breathe. "Why did you do it? You had other logics, other approaches. Did you have to do *that* to him?"

He studiously avoided a glance at Osser. "I said you might hate me," he murmured. "Jubilith, the men in that ship were so like Osser that the experiment could not be passed by. We had astronomical data, historical, cultural—as far as our observations could go—and ethnological. But only by analogy could we get such a psychological study. And it checked too well. As for having him see this thing, today . . . building, Jubilith, is sometimes begun by tearing down."

He looked at her with deep compassion. "This was not the site chosen for the launching of the interceptor. We uprooted the whole installation, brought it here, rebuilt it, just for Osser; just so that he could stand on his tower and see it happen. He had to be broken, leveled to the earth. Ah-h-h . . ." he breathed painfully, "Osser has earned what he will have from now on."

"He can be—well again?"

"With your help."

"So very right, you are," she snarled suddenly. "So sure that this or that species is fit to associate with superiors like us." She leaned toward him and shook a finger in his startled face. The courtly awe habitual to all when speaking to such as Wrenn had completely left her.

"So fine we are, so mighty. And didn't we build cities? Didn't we have giant bird-machines and shiny carts on our streets? Didn't we let our cities be smashed—haven't you seen the ruins in the west? Tell me," she sparked, "did we ruin them ourselves, because

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one superior city insisted on proving its superiority over another superior city?"

SHE stopped abruptly to keep herself from growling like an animal, for he was smiling blandly, and his smile got wider as she spoke. She turned furiously, half away from him, cursing the broken knee that held her so helpless.

"Jubilith."

His voice was so warm, so kind and so startling in these surroundings, held such a bubbling overtone of laughter that she couldn't resist it. She turned grudgingly.

In his hand he held a pebble. When her eye fell to it he rolled it, held it between thumb and forefinger, and let it go.

It stayed motionless in mid-air. "Another factor, Jubilith."

She almost smiled. She looked down at his other hand, and saw it aiming the disc-shaped force-field projector at low power.

He lifted it and, with the field, tossed the pebble into the air and batted it away. "We have no written history, Jubilith. We don't need one, but once in a while it would be useful.

"Jubilith, our culture is one of the oldest in the Galaxy. If we ever had such cities, there are not even legends about it."

"But I saw—"

"A ship came here once. We had never seen a humanoid race. We welcomed them and helped them. We gave them land and seeds. Then they called a flotilla, and the ships came by the hundreds.

"They built cities and, at that, we moved away and left them alone, because we don't *need* cities. Then they began to hate us. They couldn't hate us until they had tall buildings to do it in. They hated our quiet; they hated our understanding. They sent missionaries to change our ways. We welcomed the missionaries, fed them and laughed with them, but when they left us glittering tools and humble machines to amuse us, we let them lie where they were until they rotted.

"In time they sent no more missionaries. They joked about us and forgot us. And then they built a city on land we had not given them, and another, and another. They bred well, and their cities became infernally big. And finally they began to build that one city too many, and we turned a river and drowned it. They were pleased. They could now rid themselves of the backward natives."

JUBILITH closed her eyes, and saw the tumbled agony of the mounds, radiating outward from a lake with its shores too bare.

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"All of them?" she asked.

Wrenn nodded. "Even one might be enough to destroy us." He nodded toward Osser, who had begun to cry again.

"They seemed . . . good," she said, reflectively. "Too fast, too big . . . and it must have been noisy, but—"

"Wait," he said. "You mean the people in the picture Osser showed you?"

"Of course. They were the city-builders you — we — destroyed, weren't they?"

"They were not! The ones who built here were thin, hairy, with backward-slanting faces and webs between their fingers. Beautiful, but they hated us . . . The pictures, Jubilith, were made on the third planet of a pale star out near the Rim; a world with one Moon; a world of humans like Osser . . . the world where that golden ship came from."

"How?" she gasped.

"If logic is good enough," Wrenn said, "it need not be checked. Once we were so treated by humanoids, we built the investigators. They are not manned. They draw their power from anything that radiates, and they home on any planet which could conceivably rear humans. They are, as far as we know, indetectible. We've never lost one. They launch tiny flyers to make close searches—one of them made the pictures you saw. The pictures and other data are coded and sent out into space and, where distances warrant it, other investigators catch the signal and add power and send them on.

"Whenever a human or humanoid species builds a ship, we watch it. When they send their ships to this sector, we watch their planet *and* their ship. Unless we are sure that those people have the ability we have, to share all expertness and all creative thinking with all who want it—they don't land here. And no such species ever will land here."

"You're so sure."

"We explore no planets, Jubilith. We like it here. If others like us exist—why should they visit us?"

She thought about it, and slowly she nodded. "I like it here," she breathed.

WRENN knelt and looked out across the rolling ground. It was late, and most of the villagers had gone home. A few picked at the mound of splinters at the implosion center. Their limbs were straight and their faces clear. They owned little and they shared their souls.

He rose and went to Osser, and sat down beside him, facing him, his back to Jubilith. "M-m-mum, mum, mum, mum, mum-mum-mum," he intoned.

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Osser blinked at him. Wrenn lifted his hand and his ring, green and gold and a shimmering oval of purple, caught the late light. Osser looked at the ring. He reached for it. Wrenn moved it slightly. Osser's hand passed it and hit the ground and lay there neglected. Osser gaped at the ring, his jaws working, his teeth not meeting.

"Mum, mum, *mummy,* where's your mummy, Osser?"

"In the house," said Osser, looking at the ring.

Wrenn said, "You're a good little boy. When we say the word, you won't be able to do anything but what *you* can do. When we say the key, you'll be able to do anything *anybody* can do."

"All right," Osser said.

"Before I give the word, tell me the key. You must remember the key."

"That ring. And 'last 'n' lost.' "

"Good, Osser. Now listen to me. Can you hear me?"

"Sure." He grabbed at the ring.

"I'm going to change the key. It isn't 'last 'n' lost' any more. 'Last 'n' lost' is no good now. Forget it."

"No good?"

"Forget it. What's the key?"

"I—forgot."

"The key," said Wrenn patiently, "is this." He leaned close and whispered rapidly.

Jubilith was peering out past the implosion center to the townward path. Someone was coming, a tiny figure.

"Judilith," Wrenn said. She looked up at him. "You must understand something." His voice was grave. His hair reached for an awed little twist of wind, come miles to see this place. The wind escaped and ran away down the hill.

Wrenn said, "He's very happy now. He was a happy child when first I heard of him, and how like a spacebound human he could be. Well, he's that child again. He always will be, until the day he dies. I'll see he's cared for. He'll chase the sunbeams, a velvet red one and a needle of blue-white; he'll eat and he'll love and be loved just as is right for him."

They looked at Osser. There was a blue insect on his wrist. He raised it slowly, slowly, close to his eyes, and through its gauze wings he saw the flame-and-silver sunset. He laughed.

"All his life?"

"All his life," said Wrenn. "With the bitterness and the trouble wiped away, and no chance to mature again into the unfinished thing that fought the world with the conviction it had something extra."

Then he dropped the ring into Jubilith's hand. "But if you care to," he said, watching her face, the responsive motion of her sen-

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sitive nostrils, the most delicate index of her lower lip, "if you care to, you can give him back everything I took away. In a moment, you can give him more than he has now; but how long would it take you to make him as happy?"

She made no attempt to answer him. He was Wrenn, he was old and wise; he was a member of a unique species whose resources were incalculable; and yet he was asking her to do something he could not do himself. Perhaps he was asking her to correct a wrong. She would never know that.

"Just the ring," he said, "and the touch of your hand."

He went away, straight and tall, quickening his pace as, far away, the patient figure she had been watching earlier rose and came to meet him. It was Oyva.

Jubilith thought, "He needs her."

Jubilith had never been needed by anyone.

She looked at her hand and in it she saw all she was, all she could ever be in her own right; and with it, the music of ages; never the words, but all of the pressures of poetry. And she saw the extraordinary privacy of love in a world which looked out through her eyes, placed all of its skills in her hands, to do with as she alone wished.

With a touch of her hand . . . what a flood of sensation, what a bursting in of voices and knowledge, for a child!

How long a child?

She closed her eyes, and quietly the answer came, full of pictures; the lute picked up and played; the instant familiarity with the most intricate machine; the stars seen otherwise, and yet again otherwise, and every seeing an honest beauty. A thousand discoveries, and manhood with a rush.

She slipped the ring on her finger, and dragged herself over to him. She put her arms around him and his cheek came down to the hollow of her throat and burrowed there.

He said, sleepily, "Is it nighttime, Mummy?"

"For just a little while," said Jubilith.

—THEODORE STURGEON

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worrywart

By CLIFFORD D. SIMAK

An invalid may occupy his days by dreaming of a better world; but what about his nightmares?

CHARLEY PORTER is a copyreader on the *Daily Times* and a copyreader is a funny kind of critter. He is a comma watcher and a word butcher and a mighty tide of judgment set against the news. He's a sort of cross between a walking encyclopedia and an ambulatory index.

Illustrated by KNOTH

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Occasionally you meet a reporter or an editor or you see their pictures or you hear them spoken of. But you never hear about a copyreader.

The copyreader sits with his fellow copyreaders at a horseshoe-shaped table. If he's an old time copyreader, like Charley is, he wears a green eyeshade and rolls his shirtsleeves up above his elbows.

Inside the curve of the copydesk sits the man who directs the copyreaders. Since the inside of the desk is known as the slot, this man is called the slot man. To the slot man comes the daily flow of news; he passes the copy to the men around the desk and they edit it and write the headlines.

Because there is always copy enough to fill twenty times the allotted space, the copyreader must trim all the stories and see there is no excess wordage in them. This brings him into continuous collision with reporters, who see their ornately worded stories come out chopped and mangled, although definitely more readable.

When work slacks off in the afternoon, the copyreaders break their silence and talk among themselves. They talk about the news and debate what can be done about it. If you listened to them, not knowing who they were, you'd swear you were listening in on some world commission faced by weighty problems on which life or death depended.

For your copyreader is a worrier. He worries because each day he handles the fresh and bleeding incidents that shape the course of human destiny, and there probably is no one who knows more surely nor feels more keenly the knife-edge balance between survival and disaster.

CHARLEY PORTER worried more than most. He worried about a lot of things that didn't seem to call for worry.

There was the matter, for instance, of those "impossible" stories happening in sequence. The other men on the copydesk took notice of them after two or three had occurred, and talked about them—among themselves, naturally, for no proper copyreader ever talks to anyone but another copyreader. But they passed them off with only casual mention.

Charley worried about the incidents, secretly, of course, since he could see that none of his fellow copyreaders felt them worthy of really serious worry. After he had done a lot of worrying, he began to see some similarity among them, and that was when he really got down on the floor

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and wrestled with himself.

First there had been the airliner downed out in Utah. Bad weather held up the hunt for it, but finally air searchers spotted the wreckage strewn over half a mountain peak. Airline officials said there was no hope that any had survived. But when the rescuers were halfway to the wreckage, they met the survivors walking out; every single soul had lived through the crash.

Then there was the matter of Midnight, the 64 to 1 shot, winning the Derby.

And, after that, the case of the little girl who didn't have a chance of getting well. They held a party for her weeks ahead of time so she could have a final birthday. Her picture was published coast to coast and the stories about her made you want to cry and thousands of people sent her gifts and postcards. Then, suddenly, she got well. Not from any new wonder drug or from any new medical technique. She just got well, some time in the night.

A few days later the wires carried the story about old Pal, the coon dog down in Kentucky who got trapped inside a cave. Men dug for days and yelled encouragement. The old dog whined back at them, but finally he didn't whine any more and the digging was getting mighty hard. So the men heaped boulders into the hole they'd dug and built a cairn. They said pious, angry, hopeless words, then went back to their cabins and their plowing.

The next day old Pal came home. He was a walking rack of bones, but he still could wag his tail. The way he went through a bowl of milk made a man feel good just to see him do it. Everyone agreed that old Pal must finally have found a way to get out by himself.

Except that an old dog buried in a cave for days, getting weaker all the time from lack of food and water, doesn't find a way to get out by himself.

And little dying girls don't get well, just like that, in the middle of the night.

And 64 to 1 shots don't win the Derby.

And planes don't shatter themselves among the Utah peaks with no one getting hurt at all.

A miracle, sure. Two miracles, even. But not four in a row and within a few weeks of one another.

IT took Charley quite a while to establish some line of similarity. When he did, it was a fairly thin line. But thick enough, at least, to justify more worry.

The line of similarity was this: All the stories were "running" or developing stories.

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There had been a stretch of two days during which the world waited for the facts of the plane crash. It had been known for days before the race that Midnight would run and that he didn't have a chance. The story of the doomed little girl had been a matter of public interest for weeks. The old coon dog had been in the cave a week or more before the men gave up and went back to their homes.

In each of the stories, the result was not known until some time after the situation itself was known. Until the final fact was actually determined, there existed an infinite number of probabilities, some more probable than others, but with each probability's having at least a fighting chance. When you flip a dime into the air, there always exists the infinitesimal probability, from the moment you flip it until it finally lands heads or tails, that it will land on edge and stay there. Until the fact that it is heads or tails is established, the probability of its landing on edge continues to remain.

And that was exactly what had happened, Charley told himself:

The dime had been flipped four times, and four times running it had stood on edge.

There was one minor dissimilarity, of course . . . the plane crash. It didn't quite fit.

Each event had been a spin of the dime, and while that dime was still in air, and the public held its breath, a little girl had gotten well, somehow, and a dog had escaped from a cave, somehow, and a 64 to 1 shot had developed whatever short-lived properties of physique and temperament are necessary to make long shots win.

But the plane crash—there had been no thought of it until *after* the fact. By the time the crash came into the public eye, the dime was down, and what had happened on that mountain peak had already happened, and all the hopes and prayers offered for the safety of the passengers were, actually, retroactive in the face of the enormous probability that all had perished.

Please, let the dog escape. Tonight.

Let the little girl get well. Soon.

Let my long shot come in. Next week.

Let the passengers be alive. *Since yesterday*.

Somehow the plane crash worried Charley most of all.

THEN, to everyone's surprise, and with no logic whatsoever, the Iranian situation cleared up, just when it began to look as if it might be another Korea.

A few days later Britain announced proudly that it had

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weathered its monetary storm, that all was well with the sterling bloc, and London would need no further loans.

It took a while for Charley to tie these two stories up with the plane-girl-Derby-hound-dog sequence. But then he saw that they belonged and that was when he remembered something else that might—well, not tie in, exactly—but might have something to do with this extraordinary run of impossibilities.

After work, he went down to the Associated Press office and had an office boy haul out the files, stapled books of carboned flimsies—white flimsies for the A wire, blue flimsies for the B wire, yellow for the sports wire and pink for the market wire. He knew what he was looking for hadn't come over either the market or the sports wire, so he passed them up and went through the A and B wire sheets story by story.

He couldn't remember the exact date the story had come over, but he knew it had been since Memorial Day, so he started with the day after Memorial Day and worked forward.

He remembered the incident clearly. Jensen, the slot man, had picked it up and read it through. Then he had laughed and put it on the spike.

One of the others asked: "What was funny, Jens?"

So Jensen took the story off the spike and threw it over to him. It had gone the rounds of the desk, with each man reading it, and finally it had got back on the spike again.

And that had been the last of it. For the story was too wacky for any newsman to give a second glance. It had all the earmarks of the phony.

Charley didn't find what he was looking for the first day, although he worked well into the evening—so he went back the next afternoon, and found it.

It was out of a little resort town up in Wisconsin, and it told about an invalid named Cooper Jackson who had been bedridden since he was two or three years old. The story said that Cooper's old man claimed that Cooper could foresee things, that he would think of something or imagine something during the evening and the next day it would happen. Things like Linc Abrams' driving his car into the culvert at Trout Run and coming out all right himself, but with the car all smashed to flinders, and like the Reverend Amos Tucker's getting a letter from a brother he hadn't heard from in more than twenty years.

The next day Charley spoke to Jensen.

"I got a few days coming," he

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said, "from that time I worked six-day weeks last fall, and I still got a week of last year's vacation you couldn't find the room for . . ."

"Sure, Charley," Jensen said. "We're in good shape right now."

TWO days later Charley stepped off the milk-run train in the little resort town in Wisconsin. He went to one of the several cabin camps down on the lake that fronted the town and got himself a small, miserable cabin for which he paid an exorbitant price. And it wasn't until then that he dared let himself think—*really* think—of the reason he had come there.

In the evening he went uptown and spent an hour or two standing around in the general store and the pool room. He came back with the information that he had set out for, and another piece of information he had not been prepared to hear.

The first piece of information, the one he had gone out to get, was that Dr. Erik Ames was the man to see. Doc Ames, it appeared, was not only the doctor and the mayor of the town, but the acknowledged civic leader, sage and father confessor of the whole community.

The second piece of information, one which had served the town as a conversation piece for the last two months, was that Cooper Jackson, after years of keeping to his bed as a helpless invalid, now was on his feet. He had to use a cane, of course, but he got around real well and every day he took a walk down by the lake.

They hadn't said what time of day, so Charley was up early in the morning and started walking up and down the lakeshore, keeping a good lookout. He talked with the tourists who occupied the other cabins and he talked with men who were setting out for a day of fishing. He spent considerable time observing a yellow-winged blackbird that had its nest somewhere in a bunch of rushes on a marshy spit.

Cooper Jackson finally came early in the afternoon, hobbling along on his cane, with a peaked look about him. He walked along the shore for a ways; then sat down to rest on a length of old dead tree that had been tossed up by a storm.

Charley ambled over. "Do you mind?" he asked, sitting down beside him.

"Not at all," said Cooper Jackson. "I'm glad to have you."

They talked. Charley told him how he was a newspaperman up there for a short vacation and how it was good to get away from the kind of news that came over the teletypes, and how he envied

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the people who could live in this country all the year around.

When he heard Charley was a newspaperman, Cooper's interest picked up like a hound dog cocking its ears. He began to ask all sorts of questions, the kind of questions that everyone asks a newspaperman whenever he can corner one.

What do you think of the situation and what can be done about it and is there any chance of preventing war and what should we do to prevent a war . . . and so on until you think you'll scream.

Except that it seemed to Charley that Cooper's questions were a bit more incisive, backed by a bit more information than were the questions of the ordinary person. He seemed to display more insistence and urgency than the ordinary person, who always asked his questions in a rather detached, academic way.

Charley told him, honestly enough, that he didn't know what could be done to prevent a war, although he said that the quieting of the Iranian situation and the British monetary announcement might go a long way toward keeping war from happening.

"You know," said Cooper Jackson, "I felt the same way, too. That is, after I read the news, I felt that those were two good things to happen."

AT this point, perhaps, a couple of things should be considered.

If Charley Porter had been a regular newspaperman instead of of copyreader, he might have mentioned the plane wreck and the little girl who hadn't died, and how it was a funny thing about that coon dog getting out of the cave and how he knew of a man who'd made a mint of money riding in on Midnight.

But Charley didn't say these things.

If Charley had been a regular newspaperman, he might have said to Cooper Jackson: "Look here, kid, I'm on to you. I know what you're doing. I got it figured out. Maybe you better straighten me out on a point or two, so I'll have the story right."

But Charley didn't say this. Instead he said that he had heard uptown the night before about Cooper's miraculous recovery, and he was Cooper Jackson, wasn't he?

Yes, Cooper answered, he was Cooper Jackson, and perhaps his recovery was miraculous. No, he said, he didn't have the least idea of how it came about and Doc Ames didn't either.

They parted after an hour or two of talk. Charley didn't say anything about seeing him again. But the next day Cooper came limping down to the beach and

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headed for the log, and Charley was waiting for him.

That was the day Cooper gave Charley his case history. He had been an invalid, he said, from as far back as he could remember, although his mother had told him it hadn't happened until he was three years old.

He liked to listen to stories, and the stories that his parents and his brothers and sisters told him and read to him were what had kept him alive, he was certain, during those first years. For he made the stories work for him.

He told how he made the characters—Peter Rabbit and the Gingerbread Man and Little Bo Peep and all the rest of them—keep on working overtime after he had heard the stories. He would lie in bed, he said, and relive the stories over and over again.

"But after a while, those stories got pretty threadbare. So I improved on them. I invented stories. I mixed up the characters. For some reason or other Peter Rabbit and the Gingerbread Man always were my heroes. They would go on the strangest odysseys and meet all these other characters, and together they would have adventures that were plain impossible.

"Except," he added, "they never seemed impossible to me."

Finally he had got to be the age where kids usually start off to school. Cooper's Ma had begun to worry about what they should do for his education. But Doc Ames, who was fairly sure Cooper wouldn't live long enough for an education to do him any good, had advised that they teach him whatever he might be interested in learning. It turned out that about all Cooper was interested in was reading. So they taught him how to read. Now he didn't have to have anyone read him stories any more, but could read them for himself. He read *Tom Sawyer* and *Huck Finn* and Lewis Carroll's works and a lot of other books.

So now he had more characters, and Peter Rabbit had some rather horrible moments reconciling his world with the world of Tweedledum and Tweedledee and the Mock Turtle. But he finally worked in, and the imagined adventuring got crazier and crazier.

"It's a wonder," said Cooper Jackson, "that I didn't die laughing. But to me it wasn't funny. It was dead serious."

"What do you read now, Cooper?" Charley asked.

"Oh, the newspapers," Cooper said, "and the news magazines and stuff like that."

"That's not what I mean," Charley explained. "What do you read for relaxation? What takes

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the place of Peter Rabbit?"

Cooper hemmed and hawed a little and finally he admitted it.

"I read science fiction. I ran onto it when someone brought me a magazine six or seven years ago . . . no, I guess it's more like eight."

"I read the stuff myself," said Charley, to put him at his ease.

So they sat the rest of the afternoon and talked of science fiction.

THAT night Charley Porter lay in his bed in the little lake-shore cabin, staring into the darkness, trying to understand how it must have been for Cooper Jackson, lying there all those years, living with the characters out of children's books and later out of boys' books and then out of science fiction.

He had said that he'd never been in much pain, but sometimes the nights were long and it was hard to sleep, and that was how he'd got started with his imagining. He would imagine things to occupy his mind.

At first, it was just a mental exercise, saying such and such a thing is happening now and going on from there to some other thing that was happening. But after a while he began to see an actual set of characters acting on an imaginary stage, faint and fuzzy characters going through their parts. They were nebulous at first; later on, they became gray, like little skipping ghosts; then they had achieved the sharpness of black and white. About the time he began to deal with *Tom Sawyer* and *Robinson Crusoe,* the characters and backgrounds had begun to take on color and perspective.

And from *Huck Finn* and *Robinson Crusoe* and *Swiss Family Robinson,* he had gone on to science fiction.

Good Lord, thought Charley Porter. *He went on to science fiction.*

Take an invalid who had never moved out of his bed, who had never had a formal education, who knew little and cared less about the human viewpoint, give him an overwrought imagination and turn him loose on science fiction—and what have you got?

Charley lay there in the darkness and tried to put himself into the place of Cooper Jackson. He tried to imagine what Cooper might have imagined, what far adventuring he might have embarked upon.

Then let the same invalid suddenly become aware of the world around him, as Cooper had—for now he read the newspapers and the news magazines. Let him see what kind of shape the world was in.

What might happen then?

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You're crazy, Charley told himself. But he lay for a long time, looking up into the black, before he went to sleep.

COOPER seemed to like him, and they spent a part of each day together. They talked about science fiction and the news of the day and what should be done to ensure world peace. Charley told him he didn't know what should be done, that a lot of men much smarter than he were working full time on it, and they had found no answer yet.

"Someone," said Cooper, "must do something about it." And the way he said it, you would have sworn that he was going to set out any minute to do that very thing.

So Charley went to call on old Doc Ames.

"I've heard of you," the doctor told him. "Coop was telling me about you just the other day."

"I've been spending a little time with Cooper," Charley said, "and I've wanted to ask him something, but I haven't done it."

"I know. You wanted to ask him about the story that was in the papers here a few months back."

"That's right," Charley agreed. "And I wanted to ask him, too, about how he got up and walked after all those years in bed."

"You're looking for a story?" asked the doctor.

"No," said Charley, "I'm not looking for a story."

"You're a newspaperman."

"I came for a story," Charley told him. "But not any more. Right now I'm . . . well, I'm sort of scared."

"So am I."

"If what I'm thinking is right, it's too big to be a story."

"I hope," said Doc, "that both of us are wrong."

"He's hell bent," Charley went on, "to bring peace to the world. He's asked me about it a dozen times in a dozen different ways. I've told him I don't know, and I don't think there's anyone who does."

"That's the trouble. If he'd just stick to things like that lost plane out in Utah and the hound dog down in Kentucky, it might be all right."

"Did he tell you about those things, Doc?"

"No," said Doc, "he didn't really tell me. But he said wouldn't it be fine if all those people in the plane should be found alive, and he did a lot of fretting about that poor trapped dog. He likes animals."

"I figure he just practiced up on a few small items," Charley suggested, "to find if he could do it. He's out for big game now."

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Then good, solid, common sense came back to him and he said: "But, of course, it isn't possible."

"He's got help," said Doc. "Hasn't he told you about the help he's got?"

Charley shook his head.

"He doesn't know you well enough. I'm the only one he knows well enough to tell a thing like that."

"He's got help? You mean someone's helping . . . ?"

"Not *someone*," said Doc. "Some*thing*."

THEN Doc told Charley what Cooper had told him.

It had started four or five years before, shortly after he'd gone on his science fiction binge. He'd built himself an imaginary ship that he took out into space. First he'd traveled around our own Solar System—to Mars and Venus and all the others. Then, tiring of such backyard stuff, he had built in a gadget that gave his ship speed in excess of light and had gone out to the stars. He was systematic about it; you had to say that much for him. He worked things out logically, and he didn't skip around. He'd land on a certain planet and give that planet the full treatment before he went on to the next one.

Somewhere along the way, he picked himself up a crew of companions, most of which were only faintly humanoid, if at all.

And all the time this space-world, this star-world, got clearer and sharper and more real. It almost got to the point where he lived in its reality rather than in the reality of the here and now.

The realization that someone else had joined him, that he had picked up from somewhere a collaborator in his fantasies, began first as a suspicion, finally solidified into certainty. The fantasies got into the habit of not going as he himself was imagining them; they were modified, and added to, and changed in other ways. Cooper didn't mind though, for generally they were better than anything he could think up by himself—and finally he had grown to know his collaborators —not one of them alone, but three of them, each a separate entity. After the first shocks of recognition, the four them got along just swell.

"You mean he knows these others—these helpers?"

"He knows them all right," said Doc. "Which doesn't mean, of course, that he has ever seen them or will ever see them."

"You believe this, Doc?"

"I *don't* know. I *don't* know. But I do know Coop, and I know that he got up and walked. There is no medical science . . . no *human* medical science . . . that

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would have made him walk."

"You think these helpers, these collaborators of his, might somehow have cured him?"

"Something did."

"One thing haunts me," said Charley. "Is Cooper Jackson sane?"

"Probably," answered Doc, "he's the sanest man on Earth."

"And the most dangerous."

"That's what worries me. I watch him the best I can. I see him every day . . ."

"How many others have you told?" asked Charley.

"Not a soul," said Doc.

"How many are you going to tell?"

"None. Probably I shouldn't have told you, but you already knew part of it. What are you going to do?"

"I'm going home," said Charley. "I'm going to go home and keep my mouth shut."

"Nothing else?"

"Nothing else. If I were a praying man, I think I'd do some praying."

HE went home and kept his mouth shut and did a lot of worrying. He wondered whether, praying man or not, he shouldn't try a prayer or two. But when he did, the prayers sounded strange and out of place coming from his lips, so he figured he'd better leave well enough alone.

At times it still seemed impossible. At other times it seemed crystal clear that Cooper Jackson actually could will an event to happen—that by thinking so, he could make it so. But mostly, because he knew too much to think otherwise, Charley knew that the whole thing was true. Cooper Jackson had spent twenty years or so in thinking and imagining, his thoughts and imaginings shaped, not by the course of human events, but by the fantasy of many human minds. He would not think as a normal human being thought, and therein lay both an advantage and a danger.

If he did not think in entirely human channels, he also was not trammeled by the limitations of human thinking; he was free to let his mind wander out in strange directions and bend its energies to strange tasks. His obsession with the necessity of achieving lasting peace was an example of his unhuman attitude; for, while the entire Earth did earnest lip service to the cause of peace, the threat of war had hung over every one so long that its horror had been dulled. But to Cooper Jackson, it was unthinkable that men should slay one another by the millions.

Always Charley came back to those helpers, those three shadowy figures he pictured as stand-

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ing at Cooper Jackson's shoulder. He assigned them three arbitrary faces, but the faces would not stay as he imagined them. At last he understood that they were things to which you could assign no face.

But the thing that he still worried most about, although he tried not to think of it at all because of its enormity, was the Utah plane crash.

The plane had crashed before Cooper, or anyone else, could have known it was about to crash. Whatever had happened to the people in the plane had happened *then,* in that one split second when plane and peak had touched —had happened without benefit of the magic of Cooper Jackson's wishful thinking. And to imagine that, without such benefit, the passengers and crew could have escaped unscathed was nothing short of madness. It just couldn't have happened that way.

And that meant that Cooper not only could make something turn out the way he wanted it to turn out, but that he also could go back through time and undo something that was already done! Either that, or he could bring dead people back to life, reassembling their shattered bodies and making them whole again, and that was even madder than to think that his wishful thinking might be retroactive.

WHENEVER Charley thought about that, the sweat would start out on him and he'd think about Britain and Iran and once again he would see Cooper's face, all puckered up with worry about what the world was coming to.

He watched the news more closely than he had ever watched it, analyzing each unexpected turn in it, searching for the clue that might suggest some harebrained scheme to Cooper Jackson, trying to think the way Cooper might think, but feeling fairly sure that he wasn't even coming close.

He had his bags packed twice to go to Washington—but each time he unpacked them and put away his clothes and shoved the bags back into the closet.

For he realized there was no use going to Washington, or anywhere else for that matter.

"Mr. President, I know a man who can bring peace to the world . . ."

They'd throw him out before he had the sentence finished.

He called Doc Ames, and Doc told him that everything was all right, that Cooper had bought a lot of back-issue science fiction magazines and was going through them, cataloguing story themes and variant ideas. He seemed happy in this pastime and calmer than he'd been for weeks.

When Charley hung up, he

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found that his hands were shaking and he suddenly was cold all over, for he felt positive that he knew what Cooper was doing with those piles of magazines.

He sat in the one comfortable chair in his rented room and thought furiously, turning over and over the plots that he had run across in his science fiction reading. While there were some that might apply, he rejected them because they didn't fit into the pattern of his fear.

It wasn't until then that he realized he'd been so busy worrying about Cooper that he hadn't been paying attention to the recent magazines. Cold fear gripped him that there might be something in the current issues that might apply most neatly.

He'd have to buy all the magazines he could find, and give them a good, fast check.

BUT he got busy at one thing and another and it was almost a week before he got around to buying them. By that time his fear had subsided to some extent. Trudging home with the magazines clutched beneath his arm, he decided that he would put aside his worry for one night at least and read for enjoyment.

That evening he settled himself in the comfortable chair and stacked the magazines beside him. He took the first one off the top of the stack and opened it, noting with some pleasure that the lead-off story was by a favorite author.

It was a grim affair about an Earthman holding an outpost against terrific odds. He read the next one . . . about a starship that hit a space warp and got hurled into another universe.

The third was about the Earth being threatened by a terrible war and how the hero solved the crisis by bringing about a condition which outlawed electricity, making it impossible in the Universe. Without electricity, planes couldn't fly and tanks couldn't move and guns couldn't be sighted in, so there was no war.

Charley sat in the chair like a stricken man. The magazine dropped from his fingers to the floor and he stared across the room at the opposite wall with terror in his eyes, knowing that Cooper Jackson would have read that story too.

After a while Charley got up and telephoned Doc.

"I'm worried, Charley," Doc told him. "Coop has disappeared."

"Disappeared!"

"We've tried to keep it quiet. Didn't want to stir up any fuss —the way Coop is and all. There might be too many questions."

"You're looking for him?"

"We're looking for him," Doc

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said, "as quietly as we can. We've scoured the countryside and we've sent out wires to police officials and missing persons bureaus."

"You've got to find him, Doc!"

"We're doing all we can." Doc sounded tired and a bit bewildered.

"But where could he have gone?" asked Charley. "He doesn't have any money, does he? He can't stay hiding out too long without . . ."

"Coop can get money any time he wants it. He can get anything he wants any time he wants it."

"I see what you mean," said Charley.

"I'll keep in touch," said Doc.

"Is there anything . . . ?"

"Not a thing," said Doc. "Not a thing that anyone can do. We can wait. That's all."

THAT was months ago, and Charley is still waiting.

Cooper's still missing and there's no trace of him.

So Charley waits and worries.

And the thing he worries about is Cooper's lack of a formal education, his utter lack of certain basic common knowledge.

There is one hope, of course—that Cooper, if and when he decides to act, will make his action retroactive, going back in time to outlaw not electricity itself, but Man's discovery of electricity. For, disrupting and terrible as that might be, it would be better than the other way.

But Charley's afraid that Cooper won't see the necessity for retroactive action. He's afraid that Cooper won't realize that, when you outlaw electricity, you can't limit it to the current that runs through a wire to light a lamp or turn an engine. When you rule out electricity as a natural phenomenon, you rule out *all* electricity, and that means you rule out an integral part of atomic structure. And that you affect not only this Earth but the entire Universe.

So Charley sits and worries and waits for the flicker of the lamp beside his chair.

Although he realizes, of course, that when it comes there won't be any flicker.

—CLIFFORD D. SIMAK

Beginning Next Month . . .

THE CAVES OF STEEL

by Isaac Asimov

Three tension-charged installments of mystery and suspense in the supercity civilization of the future. You'll be missing a lot if you don't read this new novel by one of science fiction's brightest stars!

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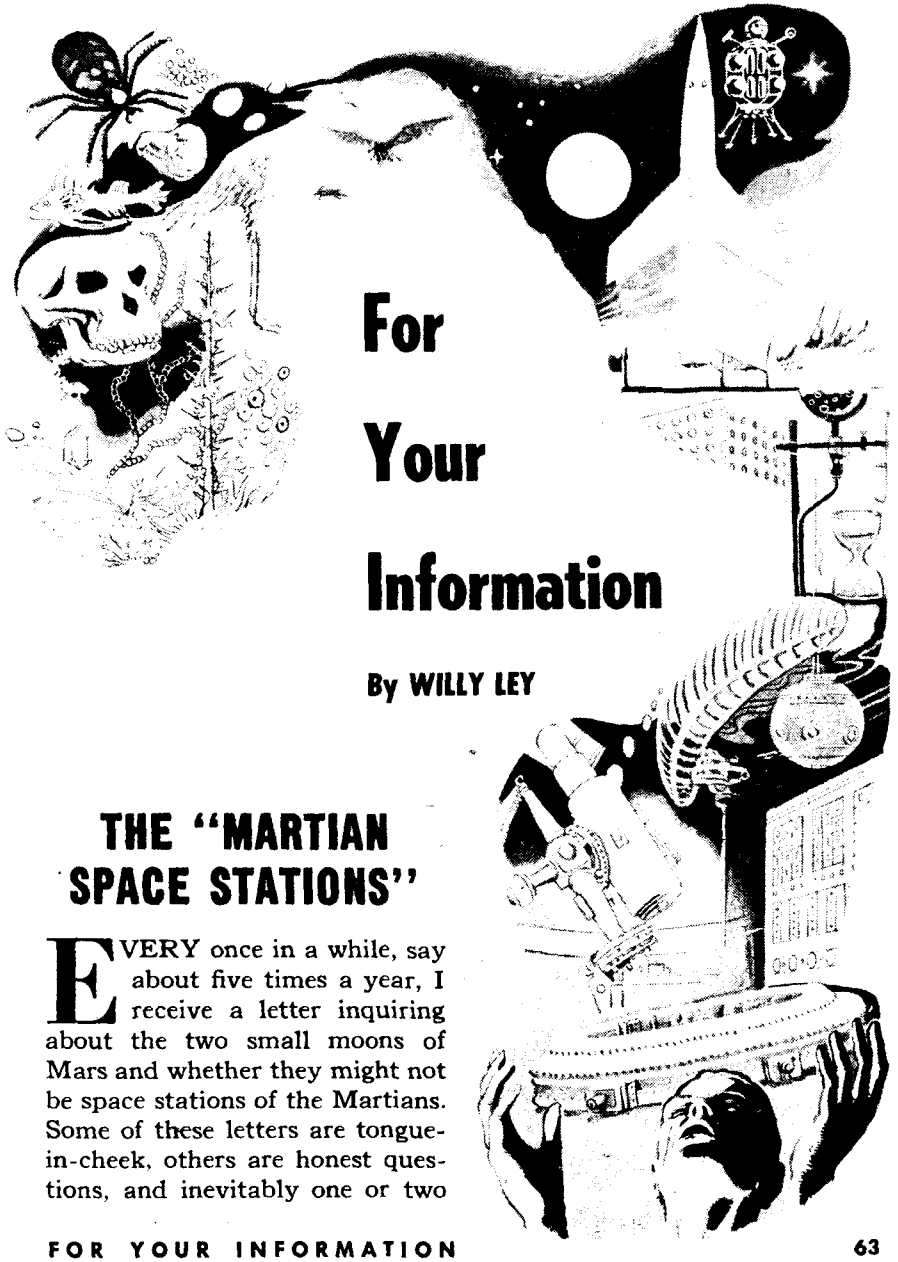

For Your Information

By WILLY LEY

THE "MARTIAN SPACE STATIONS"

EVERY once in a while, say about five times a year, I receive a letter inquiring about the two small moons of Mars and whether they might not be space stations of the Martians. Some of these letters are tongue-in-cheek, others are honest questions, and inevitably one or two

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simply take the artificial nature of the moons for granted and wonder whether a careful photographic watch for "operations" is being kept by the Earth's observatories.

My answer, of course, is always the same—namely that Phobos and Deimos are actually moons and not artificial structures, even though the Martians—if there were any—could make good use of them as space stations.

Sometimes I get a letter back, asking for proof: "Are our telescopes good enough to see detail, so that we *know* they are natural moons?"

Well, no. They are too far away (some 35 million miles when close) and too tiny (their diameters are estimated at 10 and 5 miles, respectively) for telescopic examination of their surfaces to be possible. But that scarcely makes them artificial structures—and even if we knew that Mars was inhabited by intelligent beings, the idea would still have to be rejected.

To understand the problem, let's look at the principles which will apply when we ourselves get around to putting a space station into an orbit around the Earth.

THE first consideration will be to have the space station out far enough so that its movement would not be slowed by residual air resistance. In the case of the Earth, 200 miles above sea level would do nicely, and the same figure could be used for Mars.

The next consideration is the expense of putting the station into space, and the expense of maintaining steady supply and contact. To lift a pound 20 miles costs so-and-so much fuel, and it doesn't matter whether you lift a pound of oxygen or a pound of stainless steel. To lift it 300 miles costs still more fuel. In short, it is more expensive to maintain the farther away it is (although the first 200 miles cost more by far than the next 800 miles); so the closer you can have the station the better, as far as fuel economy is concerned.

But the problem isn't that simple.

For when it comes to the inherent uses of the space station, a longer distance is preferable. The station wants to see the ground, and, for many purposes, it wants to be seen. If it is farther away, naturally it can see more area at any given moment and can be seen from a larger area. However, if you place it too far out, you lose detail; the home planet should appear large, filling a little better than 130° of the sky — which means that you would want the space station closer than ¼ planet diameter. The diameter of the Earth being

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7900 miles, we would place our own space station or stations higher than 200 but lower than 2000 miles.

The precise height within these two limits will be decided by still another consideration: Since a very close check will be kept on the movements of the space station, it is convenient to place it at a distance where its natural period of revolution around the planet is an *even fraction* of the planet's rotation. That's the reason why von Braun wants his station at 1075 miles, for that distance produces one revolution in 120 minutes. It is also the reason why I advocated the distance of 350 miles for an unmanned orbital instrument carrier, because that distance produces a period of 96 minutes.

Of course, there is the 24-hour orbit at 22,300 miles, where the period of revolution is equal to the Earth's rotation; but such a high orbit is of little use, except for planet-wide radio and television coverage, in which case you need three relay stations, spaced 120° apart, in the same orbit.

Now that we have refreshed our memory, let's check what the Martian "engineers" have done.

Their space station should not be farther out than 1050 miles at the most, this being ¼ planet diameter, and it should be no closer than 150 miles. One useful distance for Mars would be about 500 miles from the planet's surface—moving at a little less than 2 miles per second, the station would need 1/10th of a Martian day for one complete revolution.

The Martian "engineers," then, have done a pretty sloppy job.

The Martian day is 24 hours, 37 minutes and 23 seconds, or, forgetting about those 23 seconds, 1477 minutes long—and the moon Phobos moves around the planet 5800 miles from the center (or 3700 miles from the surface) once in 7 hours and 39 minutes, or once in 459 minutes. This is not only too far out on general principles; it is also a time relationship which is about as awkward as you can make it. As for the moon Deimos, it is even beyond the distance which, in the case of Mars, would result in a one-day orbit. The actual distance is 12,500 miles from the surface, and the period is 30 hours and 18 minutes or 1818 minutes.

Sorry, gentlemen, don't bother looking for "operations." The moons of Mars are just moons, probably asteroids captured from the nearby belt.

CALIFORNIA INCIDENTAL INTELLIGENCE

THERE is one club for "People Who," which, if it existed, would be very exclusive by its

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very nature, small in numbers of membership, but spread over large portions of the world, excluding the iron curtain district, Africa and South America. Its name would be "The Society of People Who Have Handled a Live Tuatara," and I would be a member.

A few months ago I reported on Tuatara in this column and on the fact that, for the first time in many decades, the New Zealand government had permitted the export of a few live specimens. There is one in the New York Zoological Park, and one should assume, since I live in New York City, that that's the one I met socially. But things don't work that simply; I still haven't even seen the New York specimen. Instead, I made the acquaintance of the one in the San Diego Zoo, and so did Chesley Bonestell. Both our thanks to its keeper, Mr. Shaw, who generously pulled the somewhat reluctant survivor from the Mesozoic Age out of its heated cage for close inspection.

An almost full-grown specimen, it measured 23 inches upon arrival in America, and has grown by about an inch since then. Because it is mature, the pineal or "third" eye has virtually disappeared. The third eye is reasonably conspicuous in a very young specimen, but tends to disappear with increasing age, and eventually it can be located only by a few tiny scales in a *rosette*-like arrangement. All of which proved to me in retrospect that the only other specimen I'd ever held, a dried one from the collection of the Natural History Museum in Berlin, was quite young.

Handling the living specimen, I learned a few things about Tuatara that you don't find in books—at least, I don't remember reading them. Those "spines" on the back of the head and on top of the body do not only look like the empty shells of sunflower seeds, they also feel that way—dry and fairly soft. And the spines on top of the tail are pointed and hard. The loose skin around the neck is just as loose, or even more so, as it looks on photographs—it feels like fine, dry, old silk. As for the color, it is best described as "rock color"—neither a pronounced gray nor a pronounced brown—overlaid by a sheen of quite brilliant moss green.

Tuatara has exceptionally large eyes, and the San Diego specimen is in the habit of sitting for hours with one eye closed. What is probably the strangest aspect, in view of the background and age of the type, is that they like to be handled — after a while you wouldn't be surprised if they purred . . .

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PRIOR to that side trip to San Diego, Dr. Robert S. Richardson had taken me up to Mt. Wilson Observatory. (To be precise, it was Chesley Bonestell who took me up the mountain, for he was driving, but Dr. Richardson acted as guide when we reached the top.) The visit included a look at the 60-inch telescope, a close look at the 100-inch (which Arthur C. Clarke called a "Victorian instrument") and an even closer look at the 150-foot solar tower. Dr. Richardson even took us up. You ride in an open steel box which rises outside the tower. Then you step across some 18 inches of nothing into the dome. And when the dome opens, you discover that there is no railing.

Because I did not find the 100-inch especially "Victorian" myself—the Flushing IRT subway is much more so in my opinion—arrangements were made to show me the 200-inch on Palomar Mountain. Of the 200-inch I can only say that it is colossal, breathtaking and awe-inspiring. This extends to the control mechanism—everything is enormous. What is normally a reflection inside a prism goes here across an entire room. Where you ordinarily turn a screw elsewhere, you have here a few handwheels.

Even more modern looking and streamlined than the 200-inch is Palomar's 48-inch Schmidt telescope, housed in a separate dome. If it were mounted in the open, every visitor would take it to be a heavy siege howitzer, complete with two recoil absorbers. These, when you look closer, turn out to be "finders"—small (by comparison) telescopes used for aiming the camera. There are two of them because the Schmidt can work from horizon to horizon, and in many of its positions one finder is most awkwardly placed; then you use the other, for the more finder A is out of reach, the easier finder B can be approached. The Schmidt bears the name of its originator—or inventor, if you prefer—Bernhard Schmidt of the observatory of Bergedorf, near Hamburg, Germany.

The Schmidt is based on two ideas. Normally, when you build a telescope of the reflecting type, you begin by making a spherical mirror, which is comparatively easy. Then you *parabolize* the spherical mirror, which is tough and tedious. The difference between the spherical surface and the parabolic surface is small, but it is an important difference—for one surface can be used and the other is useless. Useless, that is, until Bernhard Schmidt had the first of his two ideas that went into his invention.

Why correct the mirror physically, he thought. Why not

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leave the spherical surface alone and correct its useless image optically?

This required a correcting lens —something very hard to make, mostly because no such lens had ever been made before. In fact, the correcting lens is so unlike other lenses, and differs so little from a piece of plate glass, that many astronomers call it the correcting "plate" rather than the correcting "lens."

One thing I did not know until told: The designation of a Schmidt is based on the size of the correcting plate. Palomar's 48-inch has a correcting plate of that size, while the diameter of the spherical mirror is 72 inches. (Of course, there are some instruments in which both units have the same diameter, but it is the correcting plate that counts.)

Even with all this, however, you still don't get your image on a flat plane; the image remains curved. And this is where Bernhard Schmidt's second idea came in. One could either use such a small portion of the focal image that the curvature didn't matter too much; or one could sit down and try to figure out how to flatten it optically; or one could simply curve the photographic plate.

For the 48-inch Schmidt they use square plates of thin glass (14 by 14 inches, if I remember correctly) which flex enough to fit into a plate holder that forces them into shape. Of course, when they are taken out they flatten again, and you have your photograph — no optical refinements or fancy tricks needed. Except one:

In the basement of the dome, there is a plate holder, with *double* the curvature of the one in the camera. The plate holder is mounted over a metal drawer, and there is a metal basket nearby. Each plate is thus tested before use—it's so much easier to dispose of a drawerful of glass splinters than it is to fish them out of a large but delicate cannon-shaped camera!

MEA CULPA

HAVE you ever, at a party, for example, called one person persistently by the name of somebody else, either because of an accidental resemblance or because the correct name sets up some association of ideas? Well, I do this occasionally, and did it recently in GALAXY *Science Fiction* in a reply to a letter. And, of course, I was promptly caught—in this instance by Dr. Lincoln LaPaz, the Director of the Institute of Meteoritics of the University of New Mexico.

My mistake, committed in the May issue, was to say that the

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Pretoria Salt Pan has a diameter "on the order of 20 miles." Dr. LaPaz gave the correct figure in his letter, which is 3330-3450 feet, and continued: "No doubt you had in mind the remarkable Vredefort Ring structure in South Africa which by many is regarded as of meteoritic impact origin; and which, could we remove the sediments now covering much of the Ring, would be seen to have a diameter of at least 20 and, possibly, of as much as 30 miles."

Yes, this is the one I had in mind, and this is about the fifth time that I have called the Vredefort Ring the Pretoria Salt Pan. But it is the first time that it's happened to me in print, and maybe this will cure me. My thanks to Dr. Lincoln LaPaz for catching it.

—WILLY LEY

ANY QUESTIONS?

I have two questions; one is: would a space station of Dr. von Braun's design be visible to the unaided eye from Earth? Another is: how much difference in "seeing" is expected by astronomers as they contemplate the possibility of work outside our atmosphere?

C. W. Olney
356 *Acacia*
Sierra Madre, Calif.

Yes, von Braun's space station would not only be visible from the ground, it would be a fairly conspicuous slow-moving star. It would be easiest to see if the observer on the ground had the station overhead either just before sunrise or soon after sunset. In daylight, he might be able to pick it out if he knew where to look. In fact, the naked eye visibility of the space station may have some propaganda value: at least one expert on the Far East has gone on record as saying that the existence of the "American star" would greatly impress the Asiatic peoples.

As for the improvement of "seeing," no simple answer can be given. Our atmosphere absorbs radiation of different wavelengths to different degrees. It is almost transparent to what we call visible light and to the very short electrical waves used in television, and almost opaque to other wavelengths which normally never reach the ground. To say that astronomical instruments above the atmosphere would receive a total of three times as much radiation as they do on the ground is probably a conservative statement. It will be at least that much, and it may be more.

I would like to know whether it is a recognized fact that a

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planet's age is the higher the farther it is from the Sun.

L. Comunale
25-54, 38th St.
Long Island City 3, N. Y.

The idea that a planet is older the farther it is from the Sun was based on the so-called Kant-Laplace hypothesis of the formation of the Solar System. In that hypothesis, it was assumed that the matter which later condensed into planets had been thrown out from a rapidly spinning sun in successive rings. Under this assumption it seemed obvious to have the age of a planet inversely proportional to the distance from the Sun, and some people even went ahead and calculated the respective ages. This was especially reckless in view of the fact that they didn't even know the age of the Earth.

Current theories assume that all the planets were formed at about the same time, because they condensed from dust and gas which never was a part of the finished Sun.

Is it true that if one of the planets were destroyed or moved from its orbit the balance of the whole Solar System would be destroyed?

Philip Officer
402 Ave. La Resolana
Albuquerque, New Mexico.

The mass of all the planets taken together is only a fraction of one per cent of the Sun's mass. For this reason, the destruction or removal of one planet would not change the overall picture at all. There would only be very minor changes in the orbits of the planets nearest the missing one.

During the last few months I have read several articles and books about climbing Mt. Everest. Most of the climbers said emphatically that they did not use oxygen in the past and would not use it in the future. Yet I understand the Air Force makes everybody put on masks at 14,000 feet, only half the height those people climbed to. Why do they disdain oxygen, not sportsmanlike or something?

Lucy Cores
15 Hillside Rd.
Larchmont, N. Y.

In the first place, they *do* think it is not sporting to use oxygen in the conquest of Mt. Everest. As one member of a former expedition expressed it to me: "If you want to conquer the mountain by mechanical means, you might as well use an airplane or a helicopter."

But in addition to this attitude, which you may or may not share, there is a very sound practical reason. The members

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of these expeditions spend months at altitudes of 15,000 to 18,000 feet, where the air pressure is just about half what it is at sea level, in order to accustom themselves to low pressures before attacking the 29,000 foot summit. If they didn't do this, but instead relied on oxygen, and then something went wrong with the oxygen supply . . .

In such a case, an airplane pilot can simply put his plane into a steep dive and reach comfortable levels in a matter of minutes. But the mountain climbers could not get to comfortable levels and would perish.

Post Script, June 2, 1953: Everest climbed . . . with oxygen.

What is a "space warp" and how does it work?

Larry Givens
RFD No. 1
Wexford, Penna.

A "space warp" may simply be defined as a term in the science fiction fan's vocabulary. In stories it is used when the author has to get a spaceship over a distance of a few hundred light years in a hurry, and as usually stated to be a fourth-dimensional phenomenon.

One explanation read as follows: supposing you have a book, whose pages are inhabited by two-dimensional creatures. One of them is sitting in the center of a left-hand page and wants to go to the center of the right-hand page. For the two-dimensional creature, this would be a fairly long voyage; but a three-dimensional creature would simply step across the tiny gap separating the two pages of the (closed) book.

In this explanation, the space warp is a kind of shortcut through the fourth dimension. Other authors do not bother to explain it at all. Still others call it "hyperspace."

How cold is it in space?

Russell Chauvenet
721 Gist Avenue
Silver Spring, Md.

This is a question which requires two answers, the first being that space is neither hot nor cold; it simply does not have any temperature at all. Only material things can have a temperature. Space is not material, hence it cannot have a temperature.

But it is a different story if you ask about matter in space. A piece of matter will, of course, acquire a temperature: on one side, it will be illuminated and warmed by the Sun; on the other side, it will radiate some heat away. After a while, a balance of some sort will be

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reached, known technically as "thermal equilibrium."

The most important factor is, obviously, the distance from the Sun. A secondary factor is the nature of the body, especially its color—a dark body will absorb more heat than a light body. If you assume a color — black, for example — you can calculate what temperatures a body would acquire:

At the distance of Mercury (from the Sun) a black body would be 180° C (356° F); at the distance of Venus, 65° C (149° F); at the distance of Earth, 15° C (59° F), and at the distance of Mars —30° C (—22° F).

Beyond the orbit of Mars, the color of a body hardly matters any more; at the distance of Jupiter the temperature would be —145° C; at the distance of Saturn —180° C; at that of Uranus —210° C, and at that of Neptune —220° C. One light year from the Sun the body would be within about one degree of absolute zero: —272° C.

Is there a simple formula for the distance I can see if I am flying in an airplane?

Henry C. Backer
2232 Rhode Island Ave. NE
Washington, D. C.

Yes, there is, but you have to know how high you are, expressed in feet.

Take the square root of the height and multiply it by 1.317; the result will be the distance of the horizon in miles. The Smithsonian Institution says that this formula includes both the curvature of the Earth and refraction. Since 1.317 is fairly close to 1 1/3, you can simply take the square root of your height and add one third to it. The same formula for the metric system reads: Square root of height expressed in meters, multiplied by 3.839, gives horizon distance in kilometers.

I know that A.U. stands for "astronomical unit" and refers to the distance from the Sun to the Earth. But I also know that this distance is not always the same. Which figure is meant when astronomers say A.U.?

Gloria Kupp
6033 Burdey Avenue
Chicago, Ill.

The latest figure I have been able to find for the numerical value of an astronomical unit is that announced by Sir Harold Spencer Jones: 93,003,000 miles. But since A.U.s are normally used only for expressing general relationships, 93 million miles is good enough.

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PROBLEM ON BALAK

By ROGER DEE

Sometimes you can solve your problem by running out on it!

Illustrated by DICK FRANCIS

WHAT I'm getting at is that you don't ever have to worry about being bored stiff in Solar Exploitations field work. It never gets dull—and in some pretty strange places, at that.

Take the *S.E.2100*'s discovery of Balak, which is a little planet circling 70 Ophiuchi some 20,000 light-years from Earth, for example. You'd never expect to run across the greatest race of surgeons in the Galaxy—structural, neural or what have you—on a little apple like that, any more than you'd expect a four man complement like ours to be handed the sort of life-and-death problem they put to us.

And, if by some miracle of prophecy you anticipated both, it's a cinch you'd never expect that problem to be solved in the way ours was.

CAPTAIN Corelli and Gibbons and I couldn't have gone more than a hundred yards from the *S.E.2100* before we met our first

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Balakian native. Or, to be more accurate, before he met us.

Corelli and I were filling our little sterilized bottles with samples of soil and vegetation and keeping a wary eye out for possible predators when it happened. Gibbons, our ecologist and the scientific mainspring of our crew, was watching a swarm of little twelve-legged bugs that were busily pollinating a dwarf shrub at the top and collecting payment in drops of white sap that oozed out at the bottom in return. His eyes were shining behind their spectacles, and he was swearing to himself in a pleased monotone.

"Signal the ship and tell the Quack—if you can pry that hypochondriac idiot away from his gargles and germicide sprays—to bring out a live-specimen container," he called to Captain Corelli. "We've stumbled onto something really new here, a conscious symbiosis between entirely dissimilar life-forms! If the rest of the flora and fauna cooperate like this . . ."

At the moment, Gibbons' discovery didn't register, because it was just then that the first Balakian showed himself.

The native looked at first glance something like a wrinkled pink octopus, standing three feet high and nearly as broad, and he walked in a skip-a-step swing like a man on crutches because

his three short legs were set in a horizontal row. He had four arms to each side, the lower ones meant for grasping and holding and the upper ones for manipulation. He didn't have a head, exactly, but there was a face of sorts up near the top of the body that looked like nothing so much as a politely grinning Oriental's.

He wasn't armed, but I took no chances—I dropped my specimen kit and yanked out the heat-gun that is a part of every S.E. field operative's gear. Captain Corelli, who was on the point of calling the Quack at the ship, took his

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thumb off the mike button and grabbed for his own weapon. Gibbons, like a true scientist, stood by with his mouth open, too interested to be scared.

Then the Balakian spoke, and Corelli and I gaped wider than Gibbons. As I said before, Balak is some 20,000 light-years from Earth, and to our knowledge we were the first human beings ever to come within a hundred parsecs of the place.

"Please don't shoot, gentlemen," he said to us in Terran. "My name is Gaffa, and I assure you that I am quite friendly."

I HAD to give Gibbons credit for being fast on his mental feet; he had taken over before Corelli and I could get our mouths closed, and was talking to the native as if this sort of thing happened every time we made planetfall.

"You speak Terran fluently," Gibbons said. "Or is this some sort of telepathic contact that creates the illusion of oral communication?"

The native grinned delightedly. "The contact is oral. We learned your language from an independent planet-hunter named Haslop,

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who was wrecked here some years ago."

In Solar Exploitations you learn to expect the unexpected, but to me this was stretching coincidence clear out of joint. We had the latest zero-interval-transference drive made, and I couldn't believe that any independent planet-staker could have beaten us here with outmoded equipment.

"A Terran?" I asked. "Where is he now?"

"Coming up," Gaffa said. "With my fellows."

A couple of dozen other Balakians, looking exactly like him, bore down on us through the dwarf shrubbery, and with them were two lanky Terrans dressed in loose shirt-and-drawers ensembles which obviously had been made on Balak. Even at a distance the Terrans looked disturbingly alike, and when they got closer I could see that they were identical twins.

"You don't count so good, chum," I said. "I see *two* Terrans."

"Only one," Gaffa corrected, grinning wider. "The other is one of us."

I didn't believe it, of course. Corelli didn't get it, either; his eyes had a glazed look, and he was shaking his head like a man with a gnat in his ear.

One of the Terrans rushed up to us with tears in his eyes and his Adam's apple bobbing, so overcome with emotion that I was afraid he might kiss us.

"I'm Ira Haslop," he said in a choked voice. "I've been marooned here for twenty-two eternal years, and I never thought I'd see a Terran face again. And now—"

He stopped, but not for breath. The other skinny Terran had grabbed his arm and swung him around.

"What the hell do you think you're doing, you masquerading nightmare?" the second one yelled. "*I'm* Ira Haslop, and you damn well know it! If you think you're going to pass yourself off as me and go home to Earth in my place . . ."

The first Haslop gaped at him for a moment; then he slapped the other's hand off his arm and shook a bony fist in his face.

"So that's your game! That's why these grinning freaks made you look like me and threw us together all these years—they've planned all along to ring in a switch and send you home instead of me! Well, it won't work!"

THE second Haslop swung on him then and the two of them went to the mat like a pair of loose-drawered tigers, cursing and gouging. The grinning natives separated them after a moment

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and examined them carefully for damage, chattering away with great satisfaction in their own language.

Corelli and Gibbons and I stared at each other like three fools. It was impossible to think that either of the two men could be anything but what he claimed to be, a perfectly normal and thoroughly angry Terran; but when each of them swore that one of them—the other one, of course—was an alien, and the natives backed up the accusation, what else could we believe?

Gaffa, who seemed to be a sort of headman, took over and explained the situation — which seemed to be an incredibly long-range gag cooked up by these octopod jokers, without the original Haslop's knowledge, against the day when another Terran ship might land on Balak. Their real intent, Gaffa said, was to present us with a problem that could be solved only by a species with a real understanding of its own kind. If we could solve it, his people stood ready to assist us in any way possible. If not . . .

I didn't like the sound of it, so I reached for my heat-gun again. So did Captain Corelli and Gibbons, but we were too slow.

A little stinging bug—another link in the cooperative Balakian ecology—bit each of us on the back of the neck and we passed out cold. When we woke up again, we were "guests" of Gaffa and his tribe in a sort of settlement miles from the *S.E.2100,* and there wasn't so much as a nail file among us in the way of weapons.

The natives hadn't bothered to shackle us or lock us up. We found ourselves lying instead in the middle of a circular court surrounded by mossy mounds that looked like flattened beehives, but which were actually dwellings where the Balakians lived.

We learned later that the buildings were constructed by swarms of tiny burrowing brutes like termites, who built them up grain by grain according to specifications. I can't begin to explain the principle behind the harmony existing between all living things on Balak; it just *was,* and seemed to operate like a sort of hypersympathy or interlocking telepathy between species. Every creature on the planet performed some service for some other creature—even the plants, which grew edibles without pain-nerves so it wouldn't hurt to be plucked, and which sent up clouds of dust-dry spores once a week to make it rain.

And the three-legged, eight-armed natives were right at the top of this screwy utopia, lords of it all.

Not that any of us were inter-

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ested at first in it as an ecological marvel, of course. From the moment we woke up we were too busy with plans for escaping the trap we'd fallen into.

"THE Quack is our only hope," Captain Corelli said, and groaned at the thought. "If that hypochondriac idiot has brains enough to sit tight, we may have a chance. If they get him, too, we're lost."

The Quack was a damned poor reed to lean on.

His name was Alvin Frick, but no one ever used it. He was twenty-nine, and would never have rated a space berth as anything but a hydroponics attendant, which is one step above manual labor. He was short, plump and scrubbed to the pink, and he was the only hypochondriac I ever knew in this modern age of almost no sickness. He groused about the germs swarming in his reduction tanks, and he was scared green, in spite of his permanent immunization shots, that he'd contract some nameless alien disease at every planetfall. He dosed himself continuously with concoctions whipped up from an old medical book he had found somewhere, and he spent most of his off-duty time spraying himself and his quarters with disinfectant. His mania had only one good facet—if he had been the careless sort, hydroponics being what it is, he'd have smelled like a barnyard instead of a dispensary.

We had never made any attempt to get rid of him, since we might have drawn an even worse tank-farmer, but we began to wish now that we had. We had hardly begun to figure ways and means of escaping when a bunch of grinning natives swung into our court and deposited the Quack, sleeping soundly, in our midst.

He came to just before sundown, and when we told him what had happened, he promptly passed out again—this time from fright.

"A fine lot of help *you* are, you super-sterile slob," I said when he woke up for the second time. I'd probably have said worse, but it was just then that the real squeeze began.

Gaffa came back with the two scowling Haslops in tow and handed us the problem his tribe had spent twenty-two years in working up.

"We have learned enough already from Haslop," Gaffa said, "to know something of the pressures and complexities that follow the expansion of your Terran Realm through the galaxy, and to assure us that in time we must either become a part of that Realm or isolate ourselves completely.

"We are a peaceful species and

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feel that we should probably benefit as much from your physical sciences as your people would from our biological skills, but there is a question of compatibility that must be settled first, before we may risk making ourselves known to Terra. So we have devised a test to determine what our course shall be."

WE raised our brows at one another over that, not guessing at the time just what the Balakians really had on the ball.

"For thousands of generations, we have devoted our energies to knowing ourselves and our environment," Gaffa said, "because we know that no species can be truly balanced unless it understands itself. The symbiosis between all life-forms on our planet is the result of that knowledge. We should like to assure ourselves that you are capable of understanding your own kind as well before we offer our services to your Terran Realm — and therein lies the test we have arranged for you."

Captain Corelli drew himself up stiffly. "I think," he said, "that the three of us should be able to unravel your little riddle, if you'll condescend to tell us what it is."

Gaffa sent a puzzled look at the Quack, and I could see that he was wondering why Corelli hadn't included him in the boast. But Gaffa didn't know how simple the Quack could be, nor how preoccupied with his own physiology he was.

"One of these two," said Gaffa, pointing to the two Haslops, "is the original Ira Haslop, who was stranded here twenty-two Terran years ago. The other is a synthetic creation of ours— an android, if you like, who is identical, cell by cell, with the original so far as exterior likeness is concerned. We could not duplicate the interior without dissection, which of course was out of the question, so we were forced to make compromises that—"

Gibbons interrupted him incredulously. "You mean you've created a living creature, brain and all?"

"Only the body," Gaffa said. "Creation of intelligence is still beyond us. The brain of the duplicate Haslop is one of our own, transplanted and conditioned to Haslop's knowledge, memories and ideology."

He paused for a moment, and the waiting circle of Balakians grinned with him in anticipation.

"Your problem is this," Gaffa said. "If you know yourselves well enough to merit our help, then you should be able to distinguish readily between the real and false Haslops. If you fail, we shall have no alternative but to keep you here on Balak for the

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rest of your lives, since to release you would bring other Terrans down on us in force."

And that was it. All we had to do was to take these two identical twins—who looked alike, thought alike and cursed alike—and determine which was real and which was bogus.

"For a very pertinent reason which you may or may not discover," Gaffa said, "the test must be limited to a few hours. You have until sunrise tomorrow morning, gentlemen."

And with that he crutched away at his skip-a-step walk, taking his grinning cohorts with him. The two Haslops remained behind, glowering and grumbling at each other.

THE situation didn't look too bad at first.

"There are no two things," Captain Corelli declared, "that are exactly and absolutely identical. And that applies, I should say, especially to identities."

It had a heartening sound. I've never been long on logic, being a very ordinary S.E. navigator whose automatic equipment is designed to do practically everything for him, and Corelli seemed to know what he was talking about.

Gibbons, being a scientist, saw it differently.

"That's not even good sophistry," he said. "The concept of identity between two objects has no meaning whatever, Captain, unless we have a prior identification of one or the other. Aristotle himself couldn't have told an apple from a coconut if he'd never seen or heard of either."

"Any fool would know that," one of the Haslops grunted. And the other added in the same tone: "Hey, if you guys are going at it like that, we'll be here forever!"

"All right," Corelli said, deflated. "We'll try another tack."

He thought for a minute or two. "How about screening them for background detail? The real Haslop was a bounty-claimer, which means that he must have made thousands of planetfalls before crashing here. The bogus one couldn't remember the details of all those worlds as well as the original, no matter how many times he'd been told, could he?"

"Won't work," one of the Haslops said disgustedly. "Hell, after twenty-two years I can't remember those places myself, and I was *there*."

The other Haslop gave him a dirty look. "You were *here*, fellow—*I* was *there*."

And to the captain he said, "We're getting nowhere, friend. You're underestimating these Balakians—they look and act like screwballs, but they're sharp. In the twenty-two years I've lived

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with that carbon copy of myself, he's learned everything I know."

"He's right," Gibbons put in. He blinked a couple of times and turned pink. "Unless the real Haslop happened to be married, that is. I'm a bachelor myself, but I'd say there are some memories that a married man wouldn't discuss, even when marooned."

Captain Corelli stared at him admiringly. "I never gave you enough credit, Gibbons," he said. "You're right! How about—"

"Don't help any," one of the Haslops said morosely. "I never was married. And now I never will be if I've got to depend on you jerks to get me out of this mess."

The sun went down just then and a soft, drowsy darkness fell. I thought at first that we'd have to finish our investigation in the dark, but the natives had made provisions for that. A swarm of fireflies as big as robins sailed in from somewhere and circled around over the court, lighting it as bright as day. The Balakian houses made a dim row of flattened shadow-mounds at the outskirts of the circle. A ring of natives sat tailor-fashion on the ground in front of them—a neat trick considering that they had three legs each to fold up—and grinned at us.

They had waited twenty-two years for this show, and now that it had come they were enjoying every minute of it.

OUR investigation was pretty rough going. The fireflies overhead all circled in one direction, which made you dizzy every time you looked up, and besides that the Quack had remembered that he was a prisoner in an alien environment and was at the mercy of any outlandish disease that might creep past his permanent immunization. He muttered and grumbled to himself about the risk, and his grousing got on our nerves even worse than usual.

I moved over to shut him up, and blinked when I saw him pop something into his mouth. My first guess was that he had managed to sneak some food concentrate out of the ship somehow, and the thought made me realize how hungry I was.

"What've you got there, Quack?" I demanded. "Come on, give—what are you hiding out?"

"Antibiotics and stuff," he answered, and pulled a little flat plastic case out of a pocket.

It was his portable medicine chest, which he carried the way superstitious people used to carry rabbits' feet, and it was largely responsible for our calling him the Quack. It was full of patent capsule remedies that he had gleaned out of his home medical book—a cut thumb, a surprise

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headache, or a siege of gas on the stomach would never catch the Quack unprepared!

"Jerk," I said, and went back to Gibbons and Corelli, who were arguing a new approach to our problem.

"It's worth a try," Gibbons said. He turned on the two Haslops, who were bristling like a pair of strange dogs. "This question is for the real Haslop: Have you ever been put through a Rorschach, thematic apperception or free association test?"

The real Haslop hadn't. Either of them.

"Then we'll try free association," Gibbons said, and explained what he wanted of them.

"*Water*," Gibbons said, popping it out quick and sharp.

"Spigot," the Haslops said together. Which is exactly what any spaceman would say, since the only water important to him comes out of a ship's tank. "Lake" and "river" and "spring," to him, are only words in books.

Gibbons chewed his lip and tried again, but the result was the same every time. When he said "payday" they both came back "binge," and when he said "man" they answered "woman!" with the same gleam in their eyes.

"I could have told you it wouldn't work," one Haslop said when Gibbons threw up his hands and quit. "I've lived so long with that phony that he even knows what I'm going to say next."

"I was going to say the same thing," the other one growled. "After twenty-two years of drinking and arguing with him, we've begun—God help me!—to think alike."

I tried my own hand just once.

"Gaffa says that they are exactly identical so far as outside appearance goes," I said. "But he may be wrong, or lying. Maybe we'd better check for ourselves."

THE Haslops raised a howl, of course, but it did them no good. Gibbons and Corelli and I ganged them one at a time—the Quack refused to help for fear of being contaminated — and examined them carefully. It was a lively job, since both of them swore they were ticklish, and under different circumstances it could have been embarrassing.

But it settled one point. Gaffa hadn't lied. They were absolutely identical, as far as we could determine.

We had given it up and were resting from our labors when Gaffa came grinning out of the darkness and brought us a big crystal pitcher of something that would have passed for a first-class Planet Punch except that it was nearer two-thirds alcohol than the fifty-fifty mix you get at

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most interplanetary ginmills.

The two Haslops had a slug of it as a matter of course, being accustomed to it, and the rest of us followed suit. Only the Quack refused, turning green at the thought of all the alien bacteria that might be swimming around in the pitcher.

A couple of drinks made us feel better.

"I've been thinking," Captain Corelli said, "about what Gaffa said when he limited the time of the test, that we might or might not discover the reason for ourselves. Now what the hell did the grinning heathen mean by that? Is there a reason, or was he only dragging a red herring across the bogus Haslop's track?"

Gibbons looked thoughtful. I sat back while he pondered and watched the Quack, who was swallowing another antibiotic capsule.

"Wait a minute," Gibbons exclaimed. "Captain, you've hit on something there!"

He stared at the Haslops. They stared back, unimpressed.

"Gaffa said you two were exactly alike outside," Gibbons said. "And we've proved it. Does that mean you're not alike *inside?*"

"Sure," one of them said. "But what of it? You're sure as hell not going to cut one of us open to see!"

"You're confusing the issue," Gibbons snapped. "What I'm getting at is this — if you two aren't made alike inside, then you can't possibly exist on the same sort of diet. One of you eats the same sort of food as ourselves. The other can't. But which is which?"

One of the Haslops pointed a quivering finger at the other. "It's him!" he said. "I've watched him drink his dinner for twenty-two years — he's the fake!"

"Liar!" the other one yelled, springing up. Corelli stepped between them and the second Haslop subsided, grumbling. "It's true enough, only *he's* the one that drinks his meals. This stuff in the pitcher is the food he lives on—alcohol for energy, with minerals and other stuff dissolved in it. I drink it with him for kicks, but that phony can't eat anything else."

CORELLI snapped his fingers. "So that's why they limited our time, and why they brought this stuff—to keep their fake Haslop refueled! All we've got to do to separate our men now is feed them something solid. The one that eats it is the real Haslop."

"Sure, all we need now is some solid food," I said. "You don't happen to have a couple of sandwiches on you, do you?"

Everybody got quiet for a couple of minutes, and in the silence the Quack surprised us all by

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deciding to speak up.

"Since I'm stuck here for life," he said, "a few germs more or less won't matter much. Pass me the pitcher, will you?"

He took a man-sized slug of the fiery stuff without even wiping off the pitcher's rim.

After that we gave it up, as who wouldn't have? Captain Corelli said the hell with it and took such a slug out of the pitcher that the two Haslops yelled murder and grabbed it quick themselves, and from then on we just sat around and drank and talked and waited for the sunrise that would condemn us to Balak for the rest of our lives.

Thinking about our problem had reminded me of an old puzzle I'd heard somewhere about three men being placed in a room where they can see each other but not themselves; they're shown three white hats and two black ones, and then they're blindfolded and a hat is put on each of their heads. When the blindfolds are taken off, the third man knows by looking at the other two and by what they say just what color hat he's wearing himself, but I always forget how it is that he knows.

We got so interested in the hat problem that the east was turning pink before we realized it.

None of us actually saw the sun rise, though, except the Quack and the bogus Haslop.

I was right in the middle of a sentence when all of a sudden my stomach rolled over and growled like a dying tiger, and I never had such an all-gone feeling in my life. I looked at the others, wondering if the stuff in the pitcher had poisoned us all, and saw Gibbons and Corelli staring at each other with the same startled look in their eyes. One of the Haslops was hit, too — he had the same pinched expression around the mouth, and perspiration stood out on his forehead in drops as big as grapes.

And then the four of us were on our feet and dashing for open country, leaving the Quack and the remaining Haslop staring after us. The Haslop who stayed looked puzzled, I thought, but the Quack only seemed interested and very much entertained.

I couldn't be sure of that, though. There wasn't time to look twice.

WHEN we came back to the court later, shaken and pale and bracing ourselves for another dash at any minute, we found Gaffa and his grinning chums congratulating the Quack. The bogus Haslop had dropped his impersonation act and seemed very happy.

"I've learned to like Haslop so well after twenty-two years," he

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said, "that I'm quite prejudiced in favor of his species, and I'm delighted that we are to join your Realm. Balak and Terra will get along famously, I know, since you people are so ingenious and appreciative of humor."

We ignored the Balakians and swooped down on the Quack.

"You put something in that pitcher after you drank out of it, you insult to humanity," I said. "What was it?"

The Quack backed off with a wary look in his eye.

"A recipe from the curiosa section of my medical book," he said. "I whipped up some capsules for my pocket kit, just in case of emergency, and I couldn't help thinking of them when —"

"Never mind the buildup," Captain Corelli said. "*What was it?*"

"A formula invented by ancient Terran bartenders, and not recommended except in extreme cases," the Quack said. "With a very odd name. It's called a twin Mickey."

We'd probably have murdered him then and there if the Quack's concoction had let us.

Later on we had to admit that the Quack had actually done us a service, since his identifying the real Haslop saved us from being marooned for life on Balak. And the Balakians were such an immediate sensation in the Terran Realm that the Quack's part in their admittance made him famous overnight. Somebody high up in Goverment circles got him out of Solar Exploitations field work and gave him a sinecure in an antibiotics laboratory, where he wound up as happy as a pig in a peanut field.

Which points up the statement I made in the beginning, that one thing you never have to worry about in Solar Exploitations work is being bored.

You see what I mean?

—ROGER DEE

FORECAST

In next month's 3rd anniversary issue, Isaac Asimov opens THE CAVES OF STEEL, that giant city-world where you'll live for three tensely suspenseful installments. It's a great place to visit, but . . .

A turf expert faces a frantic problem in H. L. Gold's AT THE POST—the human race is "fixed" and he has to bet it will fail to reach the finish line!

KEEP YOUR SHAPE by Robert Sheckley is more than an advertising slogan; it's a military command to the most fiercely rigid warriors ever seen on Earth!

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Far From The

Only the frigid outer colonies were havens from the sprawling, brawling inner planets —but that was where things really got hot!

Illustrated by SIBLEY

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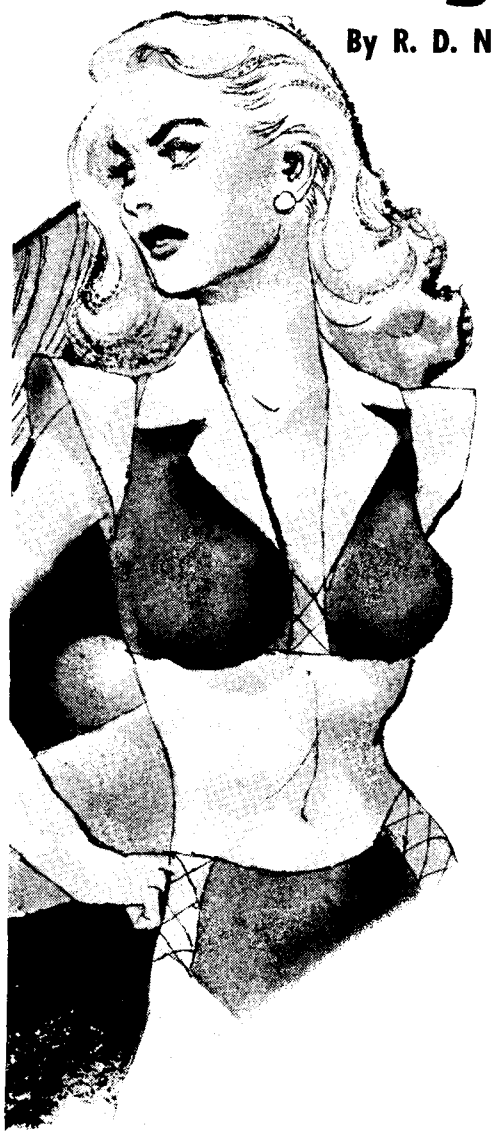
Warming Sun

By R. D. NICHOLSON



FOR about the last five hundred hours of deceleration, the rings were plainly visible to the unaided eye. Looking out through the ports and seeing Saturn, suspended in three-quarter phase against the blackness, we realized fully for the first time that we were approaching the outermost dwelling-place of Man —his closest colonized approach to the edge of interstellar emptiness.

Grenville was in high spirits at the long and cramped voyage being nearly over, and even before Titan showed a perceptible disc, he was floating about the cabin singing happily to himself. Dagmar was still as sulky and disagreeable as she had been for most of the voyage. The bursts of boisterous good humor which from the start had intermittently broken this mood, however, began to increase in frequency.

Of course she was looking forward to getting out of that cramped little spaceboat even more than Grenville and myself. She had said a lot of bitter words on the way about the discomfort of living in the small cabin for so long, with only a blanket stretched across it to give her a bit of

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privacy. Also, sanitary arrangements in such small craft are necessarily rather primitive, which annoyed her even more.

Women can be so damned practical—even when fleeing for their lives!

WE were within Titan's orbit about its primary when Grenville told me we were going to have trouble getting down.

"It'll mean a braking orbit through the atmosphere, Mr. Clemmenceton. We had to take a chance on cutting it this fine, and it looks as though we're on the losing end. We're in for a hard bump."

"Well, do your best," I said.

"I think we should be able to touch down without killing ourselves, but we'll have to get into spacesuits and be well strapped in for it."

"You won't be able to control the ship strapped into a bumpseat," I objected.

He grinned at me and said: "I can strap my head and body firm, and leave the arms and legs out. That will do."

So that was how we did it. Dagmar, of course, complained irritably about the whole performance, but was too concerned about keeping that beautiful, delicate body of hers from getting hurt to neglect any of the precautions.

It would be a pity to have got this far only to crash on Titan itself, I reflected. But Grenville would get us down safely if anyone could. He was a magnificent space pilot. Certainly few others could have evaded those two cruisers which challenged us just beyond the orbit of Mars. The following two weeks of sporadic acceleration and sidewinding ate up our fuel load, but they got us safely into the Asteroid Belt, where the cruisers' detection gear was useless. Now, though, without enough fuel for a landing, we faced the reckoning.

We struck the outer fringes of Titan's methane atmosphere still doing over five miles a second. The poor little yacht heated up like a reactor. Fortunately, the outside temperature was something like minus one hundred Centigrade, and the heat was dispersed fast enough to keep the outer skin no hotter than a dull red.

The refrigeration pumps were overloaded keeping the inside temperature down, but we were in suits by this time and not too worried.

Grenville carefully kept fuel consumption down to a minimum, letting the atmospheric drag do all the work. It was a masterly display of craftsmanship, but, even so, it was not enough to avoid a crash.

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Grenville had strapped Dagmar and myself so tightly into the shock-seats that neither of us could move a limb. Then he had fixed chest, thigh and waist bands about himself and adjusted the headrest to hold his head firm.

The tank dials showed "empty" at about nine hundred feet from the surface, but we got down to a hundred before the braking blasts cut out. Then we dropped free and hit hard with a grinding crunch.

I was momentarily dazed by the jar, but unhurt. Dagmar was apparently unconscious, though not visibly injured. I looked forward to see Grenville, his safety straps torn from their fastenings, thrown limply over the control panel. I waited a moment to recover a little, then pushed the release button under the seat-arm, slipped free, and maneuvered over to him.

As I reached him, I heard a soft moan from Dagmar, and turned to see her open her eyes. She said a few choice words about Grenville and myself, and started to feel for her own release button. I gathered from this that there was nothing seriously the matter with her and turned my attention back to Grenville.

HIS face was very white. His suit radio had been left on, and I tried to rouse him by calling his name. No result. Dagmar was ignoring us both. She shuddered violently, then dropped her space-helmeted head into her gauntleted hands and began to cry. Grenville's lips moved slightly. I called his name again, and this time he blinked his eyes open. Immediately, pain made him catch his breath sharply.

"Oh, God, my leg!" he groaned.

He had been stretched across the lower bank of firing levers, with his left leg twisted and forced between one of the stanchions and the instrument panel supports. His spacesuit had not been punctured, but from the way his leg was twisted, it looked as though there would be a break somewhere above the knee.

"It's bleeding," he said between clenched teeth. "The whole leg is warm and sticky."

"Dagmar, see if the airlock works," I called.

It didn't register. She was still crying.

I left Grenville and climbed aft over the mass of junk littered over the buckled floor-plates. The airlock, I found, had been dented, but not totally wrecked, and might still be airtight.

I returned for Grenville, carried him into the lock in a fireman's lift—strenuous work for a man well into his fifties, even in Titan's point three gravity—and opened the small test-valve in the

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gasket of my helmet to sniff the air. It was cold and smelled slightly of methane. There was a leak somewhere, probably around some part of the outer door, but only a slow one.

"We'll have time to look at that leg before the air gets bad," I told Grenville. "I'll help you peel off that suit."

Sitting on the metal floor with his legs stretched out in front of him, he rolled first to one side and then the other so I could get his spacesuit off. Then it took only a few seconds to rip his uniform trouser leg and expose the thigh.

I got a nasty shock when I saw the break, a bad compound fracture. He had already lost a lot of blood, and there was no time to be wasted in getting a tourniquet into place. He had to do it himself, tying the torn cloth above the wound, because the gauntlets of the suit I was still wearing made my hands far too clumsy for the task. He tied the last knot and the spurt of arterial blood eased to a red trickle.

A spasm of coughing shook him, and he started to rub his eyes.

"Just finished in time," he gasped, blinking tearily. "Methane's bad enough, but now I'm beginning to get lungfuls of ammonia. It hurts the leg like blazes, too. Give me a hand."

He lifted his helmet into place and I got him back into his suit.

A VIOLENT pounding on the inner door told us Dagmar was over one emotional reaction and ready for another. The intercom was out of action and the helmet radios useless with the steel bulkhead between us, but as I had spun the handle and begun to open the door, her angry voice sounded from my earphones.

"—by myself out there! By God, Wolseley, I'll get even with you for dragging me along on this idiotic—"

"Easy, woman; we're in no danger now, and I had to help tie up Grenville's leg," I answered, as gently as I could. "Come on, we'll get outside and see if we're in sight of the domes."

I lifted Grenville again, while he protested vigorously that one leg was enough to get around on in the light gravity.

"You won't be able to do anything when we get outside, anyway," he added. "The horizon will be too close for us to see more than a mile or so away. We'll just have to wait for them to come and get us. There's not a chance of us finding the domes ourselves."

By this time, Dagmar had the outer door open. The locks of all spacecraft open inward to facili-

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tate escape in difficult situations, as well as to use the air pressure to keep them tightly closed in space. In this case, it was certainly handy.

Titan's surface is predominantly ice, with a lot of ammonium carbonate and ammonia incorporated into the ice. Our nearly red-hot ship had struck with the obvious result. I estimated we had sunk about ten feet into the ice, so that, if the airlock door had opened outward, I couldn't have squeezed through to cut steps up to the surface.

I lifted Grenville on to the ice, climbed down again and reached back to help Dagmar. She took my hand, raced lightly up ahead of me, and gave a relieved smile. We looked eagerly about us for signs of life.

I hoisted myself atop the hull, but could still see only the jagged ice mountains, glinting in the cold white light of the distant Sun. I slid back to join the others.

Dagmar, I think, was about to make some sarcastic remark about my choice of a destination or Grenville's skill as a pilot, when our radios came to life.

"Hello, spaceship! Is anyone receiving me? Are you all right?"

I motioned the others to quietness and answered. "Spaceship *Ether Master* here. We are getting you. We're down in the ice. The ship is a wreck and the pilot's hurt, but we're all alive. Can you pick us up?"

"I hear you, *Ether Master*. We are coming for you in a crawler. We should reach you in about fifteen minutes."

"Thank God!" Dagmar exclaimed. "Civilization!"

We heard a voice exclaim, "A woman!" and then we settled down to wait for our rescuers.

THE noise of their antiquated machine carried on the thin cold air, and we could hear them coming, even through our heavy helmets, long before we could see them. Then at last they appeared, grinding their way toward us in a cloud of pulverized ice.

The crawler was a hybrid monstrosity obviously built here in the colony, where workshop facilities were limited, and designed to operate in the fantastic conditions of Man's most distant outpost. Its ribbed metal treads were each thirty inches wide. Its riveted body could not have weighed less than fifty Earth tons and, as it rumbled along, it dropped patches of some black low-temperature lubricant on the ice behind it.

It lurched to a halt a few yards from us, and a dense cloud began to form about twenty feet above its vertical exhaust pipe. With a bang, the front dropped open, and a figure, moving with the

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ease of long familiarity with his old-fashioned spacesuit, strode toward us.

"Welcome to the last frontier, friends!" boomed a great voice in our helmets. "Tell us what brings you to the forgotten colony. Who did you kill? Or are you just in quest of the simple life?"

"I am Wolseley Clemmenceton, President of the Triplanetary Republic, and my companions are the Lady Dagmar Educe and Major Grenville, who is hurt," I announced formally.

A second, somewhat slighter figure joined the first and exclaimed: "Ha! The biter bit! We hope you'll be happy here. You'll probably become President of the Titan Political Exiles Club if a Navy cruiser doesn't come for you first."

I peered at his helmeted face and struggled to place the voice. Then I remembered.

"Carter, Director of Venus!"

"An honor to be remembered by my—ah—successor, I am sure."

Dagmar gave a short nasty laugh. Carter spoke again.

"A few years on Titan rub away a lot of the petty motivations that dominate the inner planet way of life, Clemmenceton. Out here, we no longer have vast empires and millions of subjects to fight over. We will probably get along well."

"How cozy!" commented Dagmar.

"Now that the little pleasantries have been concluded," I said, "I would like to get my pilot to a medical man as soon as I can."

"All right, everybody into the crawler," said Carter's companion, and turned to give me a hand with Grenville.

WE clanked up the sloping front, set Grenville down on the only bit of unobstructed floor space in the cabin — directly behind the driver's seat — and Carter started the small motor hauling up the drop-front.

His companion introduced himself: "My name is Joe Gunn, folks. If you think we'd better get your friend out of his suit, we can seal this cabin and fill it with air. It's not regular practice because oxygen-methane mixtures are touchy, and it's more efficient to run these things full of methane and wear suits. We can do it easy enough when it's necessary, though—just blow the methane out with nitrogen from the cylinder before bringing up the oxygen concentration, so we don't get an explosion mixture in the cabin."

I looked at Grenville. His face looked very white in its fishbowl, and though obviously fully conscious—he had helped us get him into the vehicle—he had not

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spoken since we left the ship.

"I think we should have another look at that tourniquet, old man," I said.

Grenville nodded, and I saw that his teeth were still clamped together. I turned to Gunn.

"Get this contraption rolling while you blow the methane out, will you, please? And is there any first-aid equipment aboard?"

The clumsy machine lurched and began to swing about, with Carter at the controls. A shrill whistle told us Gunn was changing the air. They weren't much help in the way of medical supplies, however.

"Our first-aid equipment consists of adhesive patches for stopping suit leaks," Gunn explained.

I eased Grenville's leg out of the suit and loosened the tourniquet for a moment. Dagmar looked away quickly. Gunn squatted beside us.

"You may lose that leg, fella," he said quietly.

"At the moment, I'd be glad to," Grenville gritted.

I was glad to hear him say something a reaction which made me realize how much I had come to depend on him since the insurrection.

I looked at his thigh. It was certainly a mess. The sooner it was getting proper attention, the better I would like it.

THE noise Gunn made moving around caused me to look up.

"Now that we're well on our way, I thought I'd break out some rations," he said. "See what you think of our local version of coffee and biscuits."

"What kind of state of affairs did you leave behind you, Clemmenceton?" Carter asked over his shoulder.

"A fantastic botch. Hasn't any news of it come out here?"

"Not in the past six Earth months. Your lunar station quit beaming messages out here at the end of February."

"That was just about when things began to get really out of hand. Right up to the end, we were holding our own on Mars and Venus, but Terra was a cauldron of fury. The Emindale interests engineered the big protein crisis around the middle of last year, and Jockatra riots, followed. Grellet got control of the Public Order Force, through his dummy, McCardle, and built it up to face the so-called threat of the civil disorders his own agents were stirring up.

"It was plain by then that more than just the usual pressure tactics and maneuverings of various interests were in progress. While I was occupied with this side of the plot, the Gordinester family acquired control of the spacelines. I caught onto the trend of the

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whole thing too late. I declared martial law and tried to strong-arm my way through, but their planning had been too thorough. It was impossible to keep control on Earth, and their stranglehold on interplanetary travel prevented us from drawing support from Mars and Venus. The administration collapsed and its members scattered."

"You always saw yourself as a twenty-third-century Julius Caesar," said Carter, "unifying and inspiring a republic torn by civil war and overrun with corrupt officials, didn't you, Clemmenceton? We had a self-contained highly mechanized and developed culture on Venus, had cut our ties with a decadent Earth which was unable even to keep order at home at that stage, and could have preserved our achievements almost indefinitely if you hadn't forced us back into the Republic at gun-point. I gather your attempted strong-arm tactics failed. Apparently you reunified the Solar System only so it could all collapse together."

I SHOOK my head stubbornly, as argumentative as if on a TV debate.

"Someone had to try to restore central government, Carter. 'When the government is weak, the people are oppressed', as Anatole France put it. Your 'highly developed' Venusian culture was completely static. Earth and Mars, where life was easier, were slipping back fast. For eleven years, I held the Republic together by playing one interest against another, and broke up the private armies with the threat of the bombardment squadrons.

"It was always a precarious balance, but while it lasted the Interplanet rocket services kept regular schedules again, and the Lunar Station kept beaming. If I hadn't grasped the reins when I did, there would have been no space communications at all in a few more years."

Carter grinned. "You consider, then, that the day of the bow and arrow and the hand-plough will return soon, now that the Republic is deprived of your guiding hand?"

"We shall see. Old Grellet is as cunning as they come, but I cannot see him holding the Presidency for any length of time. The very forces he used to upset my administration must inevitably destroy him. The powerful families were his allies against me, but they will not submit to his rule. Nor will the mobs he stirred up with promises of restoring the old freedoms and luxuries of last century.

"His polygot following of incompatibles was united only against my government. With

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that destroyed, they must be tearing at each other right now. Even if it has the strength to ride the storm, it will be a strife-torn and weakened Republic that he rules. I could never imagine him being able to spare a cruiser to come out here after me."

"But then you never managed to spare one to chase me, either," Carter said softly, and chuckled.

The crawler lurched on, and, lost in introspection, I did not answer.

"Mr. Gunn, would you help me get these boots off, please?"

Dagmar, naturally. It was her typical reaction to being ignored.

Big Joe Gunn bent down and loosened the straps, and held the boots one at a time while she withdrew her feet. Removing spaceboots is a process that is little bother to perform for oneself. I watched with the mild interest of one who views still another variation played on a familiar theme. Carter looked back to see what was going on, and laughed loudly. Gunn glared at him.

"How far to Morgan?" I asked Carter.

"If you come up forward here, you can see two of the domes just beyond that big outcrop," he replied.

"Good. Can you call ahead and get a doctor to stand by for Grenville?"

"I've done that. There will be a welcoming committee for you, too." His voice was quite expressionless, and I found it impossible to read his meaning.

Dagmar paused in arranging her hair and looked at me. I shrugged and smiled slightly. Gunn, holding her handkerchief, resumed the task she had given him of removing smudges of dirt from her face.

A couple of minutes later, we were at the airlock of the largest dome.

WE three inner-planet people stared about us like tourists. Morgan consisted of eight domes, varying between two-hundred and five-hundred meters in diameter, and connected by low, covered passageways. Between each dome and the surrounding ice was a thick rim of some non-metallic material, which in most cases projected two to three feet from the ground, and up to which ramps had been built to the airlocks.

Our clumsy vehicle rolled up one of these, through the outer doorway, and halted before the inner. It took several minutes to pump the methane from the lock and flood it with air, and then the inner door opened and we drove into the dome proper.

"Usually we leave these things outside," Carter explained. "They

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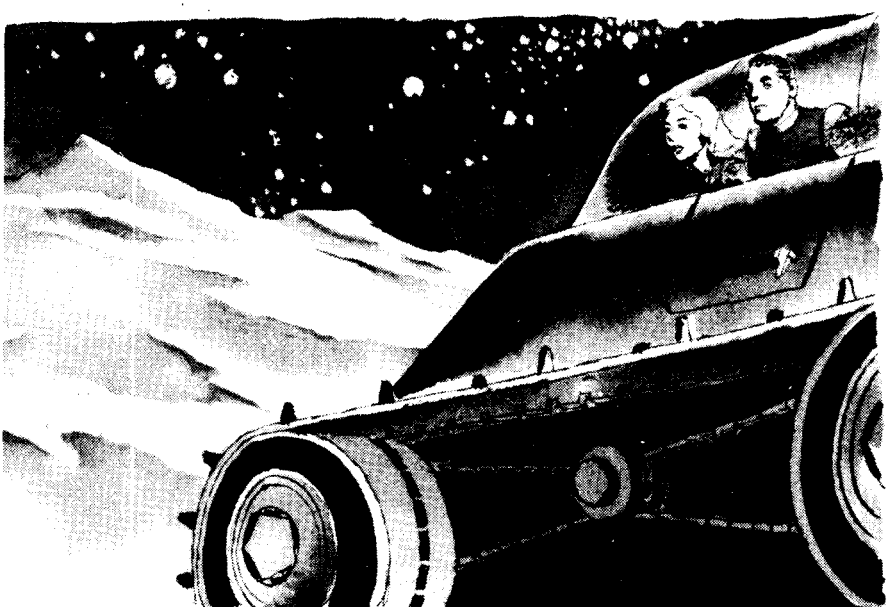
take up too much room in the domes, but at the moment this is the gentlest way of getting your pilot into the right hands."

"Good. Thanks for the consideration, Carter."

When we dropped the front of the crawler, we were met by the doctor and the committee Carter had spoken of. Nothing was said until the doctor, a heavily built man, past middle-age and with coarse ruddy features, had Grenville loaded on a wheeled stretcher and taken away. Then I looked up at the three men who stood waiting nearby.

"You wish to talk business, gentlemen?" I inquired.

"Yes, Clemmenceton," the foremost answered. "There are certain formalities to be attended to. You have met Mr. Carter, I see. This is Mr. Pelotzi and this is Mr. Brown. I am Rodericks, the Mayor. The four of us, together with Mr. Velez and Mr. Goth, who are busy elsewhere, constitute the Council which administers Morgan Settlement. To



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FAR FROM THE WARMING SUN

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us, then, you and your companions may address a request to be allowed to take up residence in the Independency."

"What is the correct formula? We, Wolseley Clemmenceton, Dagmar Educe and Martin Grenville, hereby request—"

"Yes, that'll do. Now, in order to compensate the people of the Independency for accepting you, what have you to offer?"

"What? What use have you for Republican man-hour credits when there's no intercourse between here and the Republic? Or do you mean what skills have we to place at the colony's disposal?"

"Neither. You came in a spaceship which is now lying slightly battered some miles out there." He waved an arm in the direction we had come from. "To us, that ship represents a fortune in heavy machinery which we have inadequate facilities to make ourselves. To you, it is a wreck and nothing more. Add to this the fact that you are not in a position to bargain, and I think you will agree that it is not an unreasonable price for citizenship."

The man introduced as Brown, tall, dark and about forty, nodded at me and took up the conversation.

"I won't blame you if you call this outright piracy, but piracy of one sort or another has always been a government's prerogative. When you have seen a bit of our way of life here, you will understand that we have to drive hard bargains to maintain a reasonable living standard for all. Now what's your answer?"

I GAVE him what I imagine looked like a rather sardonic smile.

"Your price is accepted," I said. "I have driven some hard bargains myself in my time and don't expect charity. The ship is yours. Now you can tell us something of our rights and responsibilities as Titanian citizens."

Carter answered me. "It's all pretty straightforward. Everyone works. Many of us have two jobs and some have more. The standard of living is higher than most inner-planet people seem to think, however. You understand, of course, that if an armed ship arrives to take you back to the Republic, no attempt will be made to protect or hide you. Is that clear?"

"Fair enough," I replied. "Well, now that that's settled, I'd like to see how Grenville is getting along. Was he taken to a hospital or don't you have any?"

"One moment. We have to vote on your admission. All in favor? Carried. Carter, will you take Clemmenceton to the hospital? I'll get citizenship papers made out presently. No hurry. Gunn,

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where are you going with that woman?"

"Going to show her around the domes," said Gunn. "Any objections?"

"That depends on Mr. Clemmenceton," Rodericks answered. "It's his affair, it seems to me."

They waited for my comment, Dagmar challenging me silently to refuse.

"No objection whatever," I said. "Go right ahead. Mr. Carter, I'm ready if you are."

Carter took me down a kind of thoroughfare between the rows of boxlike homes, factories, storehouses and office buildings. The entire inside of the dome was floored with the same mottled brown material we had noticed between the smooth painted white of the dome and the outside ice.

"It's the best insulator we've got," Carter explained. "We could stand a lot higher heat loss than we have at the moment, but if we passed much more heat than we do out through the bases and walls of the domes, the whole setup would just melt its way right down to the core of the satellite and let the ice close again over it."

"Oh," I said, "I see. The case of the missing colony, eh?"

"The next place down here is the hospital. Doc Hawthorn and his wife and their three daughters live in and run the place. The Doc learned his profession here, by the way. He's never been off Titan in his life."

"What's that? University training here?"

"Oh, Lord, no. Everything is on the apprenticeship system. We've made it work surprisingly well, you know. Medicine, of course, is the worst off. There are hardly any books, no experimental animals at all and very few facilities. A youngster just has to pick it up by working under the old doctor. Rather hard on the patient at times, but successful on the whole. The two kids studying under Hawthorn these days are both promising youngsters. They are probably getting a lesson in fracture and arterial bleeding right now."

I felt some misgivings about the treatment Grenville would be receiving.

"There was something else that caught my attention in that remark of yours," I said. "Your mention of the three daughters of the doctor living at home. I should imagine there would still be a heavy preponderence of menfolk here. How come there are three unattached women?"

"A conclusion wrongly jumped to, old man. The daughters are all married and there are a couple of kids running about the place. The men go out to work and their wives do a good job of

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combining domestic and nursing duties. The family group like that is the natural economic and social unit here. The shortage of living space keeps the group together even when it gets bigger."

WITH the excitement of the crash and the bumpy trip to the settlement now some time behind me, I was beginning for the first time to be really curious about the way these people lived. I wondered what kind of future they looked forward to, and I asked Carter.

"We look to the future a great deal. More than you would think, I suppose. With a bigger population, we could do more and life would be better for everyone. You will notice it in the colonists' attitudes. Your bringing a mistress along, for instance, will be distinctly disapproved of."

"Small-town morality."

"No, not a bit. Children are all-important to our way of thinking, and relationships like yours are not usually productive. That's the only reason."

"Hm. I always wanted children myself, but there were so many things against it. Now I probably never will have them. Dagmar doesn't want a child. There were other women back on Earth. I might have married, left an heir—"

"I don't think Lady Dagmar will like the colony. I doubt if it will like her."

I smiled at him. "You're getting old, Carter. More so than I am, apparently. Didn't you notice Gunn's reaction? Dagmar might not like the colony, but her wiles work as well here as anywhere else. I wonder what effect she's having on Gunn right now."

He looked at me intently for a moment. *He wonders how jealous I am,* I thought. Then he looked away and silently continued leading me through the settlement.

The hospital was a square building of about average size for the dome we were in. It had two stories, the lower of which was devoted to beds, an operating theater and a dispensary. The second story was the living quarters of the Hawthorns.

Carter knocked perfunctorily and we walked straight in.

"General ward," Carter explained over his shoulder. "Surgery this way."

THERE were half a dozen beds in the outer room, two of them occupied by men who eyed us curiously as we passed through, and one bed was screened off. The place was clean and everything in it was neatly arranged. As I looked at the plain iron bedsteads with their coarse white bedding, I grew more aware of

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the isolation of this colony and its continual battle with its unfriendly surroundings. They had kept it free of the mental decay that had destroyed the spirit of enterprise and respect for ethical standards among the peoples of the more comfortable inner planets.

We knocked on the surgery door, a thin sheet of plastic in a metal frame, like most of the doors on this world, constructed without wood.

"Carter and your patient's friend; we've come to see how the injured pilot is getting on," Carter answered to an inarticulate inquiring noise from within.

"Come in. He'll live."

We did so, to see Grenville with a trussed-up leg, Hawthorn with a satisfied expression on his face, two young men—both, I should say, about twenty-two or three—who were apparently the apprentice doctors, and a girl in white who, I supposed, was one of Hawthorn's daughters.

"Nastiest compound fracture I've seen in years," the medical man said to us. "He's not in any danger of losing the leg now, but it probably won't ever fully recover. The broken bone has done a lot of damage to the nerves in the forward part of the thigh. Still, I think we can patch him up well enough to make a useful citizen of him again."

Grenville smiled a little grimly. "How useful a citizen will a space pilot with only one good leg make?"

Hawthorne frowned at him.

"Don't cast aspersions on my ability, young man. You'll have two good legs. One of them just won't be up to carrying you around on hundred-meter dashes and so forth. You'll only be able to catch the women that want to be caught from now on."

"Well, Grenville," I said, "look after yourself, and do what the doctor tells you. Dagmar and I will get settled somewhere—I think she is out laying the groundwork for herself, anyway, at the moment—then, when we've found out what the settlement expects of us, we'll pay you a social call. You will probably be given something like a plant operator's job. What I shall do, I don't know. My trade is politics, but I think there would be some objections to my practicing it here."

Carter looked up, an unfathomable expression on his face for a moment.

"All right now," the doctor said. "Clear out, all of you. We have work to do. Visiting hours are over."

"Right," I answered. "See you later, Grenville. I dare say it won't be long before you're up and about again."

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AFTER we left, I asked Carter how we would get on for accommodations.

"Mayor Rodericks is getting something lined up for you, I think, though Lady Dagmar appears to have ideas of her own on that score. She seems to be trying to talk Joe Gunn into taking her in."

He watched me closely for a reaction. I grunted noncommittally. Dagmar's conduct was not altogether surprising to anyone who knew her as well as I did. At the moment, she was furious that she had allowed herself to become involved in my misfortunes, and was seeking comfort in the attentions of a young and good-looking admirer. What her next move would be, however, I doubted if she knew herself.

Carter and I turned a corner and almost collided with the councilor named Pelotzi.

"Ah!" he exclaimed. "I've been looking for you. We checked up on living space and we find that we can give the three of you rooms in Residence Four in Aaron Dome. That's the small one, over there."

"Thank you, Councilor," I said. "It may be some time before Major Grenville can be moved from the hospital, but I shall go to the quarters myself as soon as I can. Whether the arrangements will suit Lady Dagmar or not, I cannot say."

He coughed apologetically. "I am afraid they will have to, Mr. Clemmenceton. There is no other place available."

Carter and I both smiled.

"Can I get over and have a look around now?" I asked.

"Certainly, Mr. Clemmenceton. I'm sure Mr. Carter will take you there."

"Does every new arrival upset the whole system of government like this? I mean get personally shown to his quarters by the Immigration Secretary or whatever you are?"

"Well, it's three Earth years since the last ship came out this way, so there's no great strain involved," Carter answered.

Pelotzi left us, and Carter resumed his role of guide. We passed through the connecting passageway with its airtight bulkheads at each end, and entered Aaron Dome.

"Aaron is mainly residential buildings," said Carter, "except for a couple of places over there where we do a bit of air processing. This is Residence Four right here."

HE opened one of the now familiar metal-framed plastic doors, and we entered a small foyer in which was an unattended desk. Taking a book from it, he leafed through the pages to

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find the numbers of the unoccupied rooms.

"Third floor," he said, penciling something in the book. "A bedroom each, and a bathroom and lounge that you'll share with the other couple on the floor. We can't afford to waste any space, but we're not really badly crowded."

"From all appearances, I'd say you lived pretty well out here."

"We do all right. Consumer goods *are* scarce—all those things that are mass-produced so cheaply on the inner planets—and we lack adequate school and medical facilities. Just the same, the necessities of life are in reasonable supply, and we have a bit of leisure time, and a few luxuries."

"I can't tell you how impressed I am by the way you've got the technical side of things sewn up. Back on Earth, I knew you'd had no supply ship for three years, but I just didn't realize what that implied. I think I pictured Titan as an out-of-the-way colony of shaggy hillbillies, gradually reverting to savagery on a bleak, unfriendly world."

"Ha! You missed the point. In a really hostile setting like this, you either keep your technology up to the mark or die. That's why this settlement won't ever slip into decadence, even if all the rest of the Solar System does. And there's another reason, too—the kind of people who've been able to adapt themselves to life on Titan are not the ones to sit idly by and watch their world fall apart. The pioneering stock, the misfits from the more ordered and organized and safer life of the inner worlds, generations of political refugees, they've built a world that can look forward when civilization everywhere else is crumbling from the dry rot.

"Take the emphasis on children here that I was telling you about. The bigger our population gets, the more specialization is possible and the better life becomes for everyone. Well, anyway, here's the Presidential Suite, so I'll cut the sales talk."

I took the irony in good part. He selected a key, opened the door, and we both went in.

"Here are your keys," he said, and handed them to me. "There are crawlers out already to bring your ship to the domes for stripping, so you'll be able to rescue your personal effects before long."

I GLANCED around the quarters and was pleasantly surprised by their undeniably plain but eminently comfortable-looking furnishings. Nearly everything in sight was made of one plastic or another.

Carter told me more about the colony's industry:

"We've all the power we want

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from big hydrogen-powered spaceship engines. Ice, ammonia and methane are our main raw materials, with the metals at a premium. We do a bit of direct synthesis for some foodstuffs and our plastics and textiles, but most of our complex organics come from the culture vats. At present, we're trying to develop a strain of—"

The door was thrown violently open to admit an apologetic Pelotzi, driven before one of Dagmar's most violent rages. Seeing me, she switched targets.

"You, you walking antique, you drag me away from a life on a civilized world where I had every comfort and attention to a collection of huts on a chunk of ice millions of miles from anywhere! And that animal, Gunn! Then they can't give me anywhere to live and they expect me to live with you! I must have been mad to ever get—"

"There, there, old girl, you'll shock the hillbillies," I said.

Carter laughed uproariously. Dagmar picked up a heavy carved plastic ornament and threw it at him, hitting him on the shoulder as he made a belated attempt to jump aside. Then she turned on me again. She sprang like a tiger, and I caught her wrists to save my face from being clawed. She kicked my shins. Carter was still laughing, while Pelotzi stood by, looking very embarrassed.

I was not really angry. I had been through some tense experiences in the last few months, and I think they had tended to deprive my always fairly unexcitable disposition of some of its capacity for resentment, at least for the time being. I grasped both her small wrists in my left hand, drew back my right, and hit her carefully several times across the face.

She screamed and kicked with increased violence for a moment or two, then subsided, sobbing. I spoke to her quietly.

"You're misleading yourself, my darling. You're forgetting the raging mobs too easily. You would have been as violently used as I would have, if they'd been able to lay hands on you.

"You remember the form Grellet's line took. All the ills of the times were due to the lustful and irresponsible dictator, meaning me, who was impoverishing three worlds to rain jewels upon his avaricious mistress, meaning you."

SHE had become quieter. Her hands still clenched and unclenched, and her body shook, but her eyes were closed.

"My own fate would have been certain, had I been taken," I went on. "But imagine the mob's delight at the fall of the tyrant's

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pampered mistress. You might have been hung from a lamppost. You would probably have had many elaborate indignities perpetrated on you first. Possibly have been stripped and knocked down to be befouled by the multitude, then executed in some satisfyingly spectacular manner."

With a sudden wrench she tried to free her hands. I had been expecting the attempt and it was not successful. She cried:

"It was all your fault! You destroyed the power of the only people fit to rule Earth and cleared the ground for maniacs like Grellet. The old families had had generations of experience in government. You made love to me so I would help you stab them in the back!"

"Oh, now wait a minute! You were a rebel and a misfit in the old oligarchy, just waiting to attach yourself to some ambitious lover who would carry you into a position of power. Also, remember that your title and connection with the families provided Grellet with a weapon to use against me. It allowed him to turn the old popular resentment of the oligarchs against me, while at the same time he bargained with the Emindales and Gordinesters to get their support.

"Now you have two choices in front of you. I gather from your reaction earlier that Gunn can be ruled out. You can begin your intrigues all over again—and you haven't started to lose your looks yet—to get what power and luxury this world can offer. If you do, you'll probably be tarred and feathered by the sturdy colonial women.

"Or, if you're willing, and are prepared to bear children, we could conform to the provincial morality of our adopted home."

"What are you trying to do?" she spat out bitterly, yet with a little of doubt and surprise on her face. "Do you think you've got me in a position where you can keep me as an unpaid nurse for your old age? What makes you think you could have a child?"

HER words had been chosen to hurt, yet they had not been hurled with quite the violence their meaning indicated.

I drew her to me and stroked her fair hair. "Who's so old, anyway? And you're no teen-ager yourself these days. I might be pushing sixty, but while I had the rejuvenation treatments and attention of the Republic's best medical men, I did not age appreciably. I shall probably still outlive you because I have a more equable disposition. You will eventually put a fatal strain on your heart or burst a blood vessel."

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She clung to me. She looked up for a moment, disheveled blonde hair streaked down over tear-dirtied face, and smiled as our eyes met.

"Morgan Settlement may be no tropic island paradise, but it's no penal colony, either. This apartment could be fitted up to—"

Then she dropped her head against my chest again and cried unrestrainedly.

Carter took Pelotzi's arm and started to propel him from the room.

"It's all display," I explained amusedly. "Don't let it worry you. Some people call it Irish courtship. Freud wrote books about it."

He closed the door.

It had been more than thirteen years since we had first known each other, but there is nothing like violent emotional disturbance to restore for a night the passion of departed youth.

CARTER called in again at ten-thirty the next morning, showing for once a politician's tact by not coming earlier. Though his greeting was cheerily informal, he had the manner of a man come to talk hard-headed business.

"Well, have you got your domestic affairs settled?" he asked.

"More or less. I'm expecting."

"Good God, that was quick!"

"Oh, it might take a couple of years. I mean I've assured myself of the opportunity to keep trying."

"I see. Well, that's fine. Now, then, the reason for this visit. You were talking of 'practicing your trade,' as you put it. Well—" he gestured me to silence as I started to interrupt— "that is exactly what we want you to do. Take a post on the Federal Council. We're not afraid you'll try to make yourself dictator of Titan and set out to reconquer your lost Empire. Neither am I opposed to the idea on the grounds of old antagonisms. I never did and still don't like a lot of things about you and about your view of—well, everything. But, like the other councilors here, I realize how much help your administrative ability can be to us.

"The five Titanian settlements are largely self-governing, but do owe allegiance in some matters to a Federal Council. The problems of governing such a confederacy are enormous, as I suppose you can imagine."

"Hold on a minute!" I said, suddenly remembering one of the problems. "If radio here is limited to line of sight, how did we get Gunn's call from the crawler?"

"Rocket-aerials. All the crawlers have them so they can call the domes and each other from

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below their horizons. A small rocket carries a fine silver aerial up to about two and a half miles. That gives a radius of about a hundred miles, or two hundred if both sender and receiver have aerials up."

"Oh. Very clever. Well, keep talking. What other troubles are you letting me in for?"

"Apart from the griefs stemming from the environment, the usual run of small-time political feuds, nepotism, intercolony jealousies, everyone trying to get more of scarce materials than he's entitled to."

"What's the setup of the council itself? Is it elected, appointed, or what?"

"Elected, nominally. Each colony has its representatives. We won't have any trouble getting you in if you decide to accept, though."

I FROWNED and looked as if I were thinking deeply, but my mind was made up, naturally.

"I accept, Carter. You know, things are working out better for me than I had any right to hope for. What deposed autocrat, after deposition and barely getting away with his life, has ever been offered a respectable political appointment in a culture which may not be materially prosperous, but is definitely sound and is progressing, and been able also to carry a beautiful woman away with him to share his exile and raise his family in middle-class respectability?"

Carter's answer was a slight, thin-lipped smile. I read the implication behind it with little difficulty.

"Oh, I have a fair idea of your opinion of Dagmar, but you do her injustice." Pictures and fragments of reminiscences, some clear, some half-faded, were before me as I spoke. I was going to become a minor politician, with a host of routine duties. Well, there is more to life than merely satisfying ambition. What is a man whose personality is totally submerged in his ambition? Yet had I ever been truly ambitious? Who knows his own desires, at any time?

Carter smiled still, and I continued.

"When we first became lovers, she was the most talked-of beauty of the nobility. Yet she was a rebel even then against the caste-and-wealth oligarchy. Throughout my eleven years in the lonely Damoclean seat, she was almost my only confidente and ally. If you attempt to evaluate her on the evidence of temper, temperament and flirtation during a short twenty-four hours, you will only mislead yourself.

"The wilfulness you've seen;

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her strength of character and intelligence, you have not. While I presided in the Republic, we talked of marriage and an heir. She wanted the position and prestige of the former, without being willing to undergo the discomfort of the latter. She is now willing to have children, particularly since her own youth is going. You

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may say that she is still a lot younger than I am. True. But after all—"

"Mr. Carter! Mr. Carter! The Space Field Tower has spotted a ship approaching! A big one!"

The young colonial who had run up with the message was puffing hard and trying to get his breath back. My stomach felt cold. I realized with a jar the extent to which overconfidence makes men vulnerable to emotional shock.

"It looks as though you were wrong, Clemmenceton — you'll have to face the music," Carter said softly.

"My judgment appears to have been badly astray," I replied, my voice flat and expressionless, and speaking half to myself.

I honestly never believed they had the remotest chance of keeping the peace in their own domains with the forces at their command, let alone being able to spare a cruiser to come out this far after me. But very evidently they had.

"Well, perhaps my personal misfortune should be weighed against the return of stable government to the inner planet people," I murmured. I imagined the planets torn by rioting, mob violence, and countless pitched battles. "It just shows how a man will overestimate his own importance."

DAGMAR had come quietly from the bedroom, and I was not aware of her presence until I felt her gently rest her hand on my arm.

"And we weren't even unpacked," she said. "Wolseley, there's no need to say anything about Grenville. They won't be looking for him and he wasn't really playing empire-builders with us." Carter was looking at her intently. "We'll probably have a more comfortable trip back in the cruiser's brig than we had coming out in the *Master's* cabin, anyway."

"The tower says they should have contact with the ship in not much over an hour," the messenger said.

Dagmar whirled to face him. "You mean you haven't spoken to them yet? You don't really know what they want? What's the idea? Are you just trying to give Wolseley and me a fright?"

"I'm sorry, Mrs. Clemmenceton," he answered, and I smiled at the form of address, "but there has been no contact between Titan and the inner worlds for over half a year now, and there was little enough before that. There could be no other reason for a big ship coming now."

Then her eyes filled and I put one arm around her and held her close.

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Carter turned to me and said, "I regret this. We could have used you to such good purpose. We've got a world to run, with underpopulation and a shortage of machinery and a hostile environment to battle against. I wish we could give you sanctuary, Clemmenceton, but we just can't afford to antagonize the inner world military. We're quite defenseless here, you see."

I suppose at that moment my feelings were a chaotic admixture. There was a kind of helpless cold fury at being so suddenly deprived of the refuge in which I had felt myself safe, an angry contempt for Carter and the colonials of Titan for their fear of Grellet's ship. Of course I was aware that this anger sprang from my own position, but that did not lessen the feeling any. And there was a kind of resignation to the inevitable —and also a lot of gratitude to Dagmar for the way she was taking the ship's arrival.

"Let's go to the tower," I said.

"Yes, I suppose we might as well. It would be humiliating to be taken to the ship under guard. Wait while I put some makeup on."

"The reaction," I told Carter, "is typical. At times it has been an attitude which has infuriated me, but, at the moment, I like it."

SHE was only gone a moment, however. I looked at her closely when she reappeared. She was as lovely as I had ever seen her. The light slack-suit, as affected by the settlement women, was not unbecoming, and together with the way her long light-brown hair was pulled back and held by clips, and the lightly applied makeup, it made her look very young. Carter's face seemed to express cynicism, and I think embarrassment, as I kissed her and we set out for the tower.

The "space field" was an arbitrarily defined area of ice, and the tower a plastic affair, rising about two hundred feet into the poisonous air.

In the hemispherical, transparent room at the top were two men, one of whom had earphones on and sat at the radio table. The second turned to face us.

"No communication with them yet, Mr. Carter, though they're well within Morse range. In fact, I'd say now that they are in verbal range—"

"Quiet, I'm getting something!" interrupted the man wearing the phones.

He stretched out his left arm and cut in the loudspeaker on the wall. Through a storm of crackling and whistling came a man's voice.

"—Settlement. Hello, Morgan Settlement. Spaceship *Pax Re-*

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publica calling. Space—crackle, crackle—*Republica* seeking permission to land with a hundred and twenty refugees from Earth. Seeking—"

Dagmar's shriek obliterated the repeat, and she began to pummel my arm and back, incoherently exclaiming a series of "We needn't go back"s and "I said it couldn't be a warship"s and similar things.

I just suddenly relaxed. The shocks were coming in too rapid a succession to be appreciated as they happened.

"They'll make it in about ten or twelve hours, I should say," the operator's assistant said.

Dagmar and I looked at each other, and started back down the long stairway. About halfway to the bottom was a landing, with a big clear port looking out over the craggy whiteness. Here we paused.

AS I watched the spectacular scintillations of an iceworld sunset, my thoughts ran again and again over the last hour. Here I would still be working for something I believed in very dearly, though in a small way, and without fanfares. Pageantry and circumstance, however, I had known well, and would not mourn their loss.

Since my first entry into politics at the age of eighteen, just before the collapse of the Fourth Kingdom, I had belonged to many parties and known many viewpoints. Then I was a pacifist, abhorring bloodshed and violence, but, like most, I always recognized the decadence of the times, and when the chance came to play Caesar, I took it.

The Empire was still-born, and the planets had reverted far toward barbarism, but out here, beyond the reach of bloody warlords and roving pirates, I would play a part in a small culture which logically should remain as Carter once had hoped his Venusian state would remain—an isolated outpost whose people must retain their science merely to stay alive, and which would survive to welcome eventually the first contact with a resurgent inner-world culture.

Dagmar turned her gaze from the sparkling ice crags, so brilliant beneath their blue-black sky, and our eyes met.

It would be a stoic's world to bring children into, but one where hope and ambition were not unknown, and one that could offer the satisfaction that comes from achievement.

Here I would find my personal fulfillment. Here I would see my children grow up, on this farthest outpost, far from the warming Sun.

—R. D. NICHOLSON

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NEW HIRE

By DAVE DRYFOOS

Very admirable rule: Never do tomorrow what you can put off until after the age of forty!

ONE thing about an electronic awakener: no matter how elaborate its hookup, melodious its music, and important its announced reminders, when it goes on in the morning you can always turn it off again. Boswell W. Budge always did exactly that.

But there's no turning off one's kids, and thus, on the most important morning of his life, February 30, 2054, Bozzy arose, much against his will, promptly at 0800.

His Sophie, eight and ladylike, merely shook the bed with a disdainful gesture. But Howard, six, masculine, and athletic, climbed right up and sat on Bozzy's stomach. Baby Ralph, of the golden smile, gave Bozzy a big kiss, and Bozzy thus shared the gold, which was egg.

"Did your mother send you in here?" Bozzy demanded, gazing suspiciously around with one eye open.

"We came because we love

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you," Sophie answered.

That opened Bozzy's other eye. "Thank you, dear," he said. "You're very sweet or very clever. Now if you'll coax Howard off my stomach—"

"I don't have to be coaxed," Howard announced, sliding to the floor with all the covers. "From now on, you just order me, Daddy. Because you'll be a Senior Citizen tomorrow."

Bozzy didn't want to think of that just then. "Tell your mother I'm up," he said. "And get out so I can bathe and dress."

Sophie minced, Howard ran, Ralph toddled.

Bozzy rose, a pudgy man slightly under average height at six feet two, with blue eyes and thinning brown hair. He was exactly thirty-nine years, eleven months, and twenty-nine days old.

And that was the point. At forty, he would have to go to work. This was his day for job-taking.

He dreaded it.

HE put the coming ceremonies out of his mind and concentrated on his supersonic bath, the depilatory cream, the color of his outer clothing. It took time to achieve the right shade of purple in the bathroom plastic-dispenser, but no time at all to pour, solidify, and cut the sheet-like robe required for the occasion.

In it, he was the sensation of the breakfast room, handsome as a male bird in spring plumage. Kate, his slender wife, who had been up and at work for an hour, looked moth-eaten by comparison, as if their nest had been lined with her plucked-out down.

"You look very attractive this morning, Kate," Bozzy told her. He gave her an extra-warm kiss.

"Well!" she said. "Quite the gallant today, aren't we? Just be sure you're on time today, darling. Remember what Mr. Frewne had to say about promptness."

Frewne. That overinflated windbag. The obesity who was about to become his boss. Without having worked a day in his life, Bozzy found he hated the idea of having a boss.

"Let's think of something pleasant," he grunted, and thought of breakfast.

He took his place at the table. Kate and the kids had already eaten, so Kate served, while the kids, attracted by his finery, stood off and watched him swallow a vitamin pill, a thyroid pill, and a Dexedrine pill.

Solemnly, he opened the three eggs Kate brought. Each was guaranteed by her to have been irradiated for exactly two minutes and fifty-five seconds, and guaranteed by the grocer to have

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been enriched by feeding the hens three kinds of mold.

His mouth was full of the third and last one when Sophie asked, "Why do you have to go to work, Daddy?"

The reminder choked him. Gulping, he said, "To support us all, honey. My pension stops tomorrow."

"Yes, but I read in a book where people used to go to work when they were young."

He was tempted to say, "I *am* young!" but thought better of it. "That was long ago, dear."

"Were people different then?"

"No, but society was. Our Senior Citizens used to be pensioned off, while younger people worked. But when science improved the Seniors' health, they got tired of sitting in corners on pensions and, besides, a lot of them died soon after they stopped working. When it got so that more than half of all voters were between forty and seventy years old, the Seniors voted their pensions to the young, to get educated and raise families on, and nobody's allowed to work till he's forty. Now do you see?"

"Forty is awful old," said Sophie.

HOWARD had meanwhile taken his mother's hand. "*You're* not going to work, are you, Mommy?" he asked.

"Not for ten years, dear. I'll be here when you want me, so why don't you go play on the balcony? I've got to get Daddy off and give Ralph his bath."

"I'll bathe him," Sophie volunteered. "You help, Howie. We can make like we're young."

"Don't drop him," Kate warned.

"Clean up the bathroom afterward," added Bozzy.

"Yes, sir," said Howard, for the first time in his life.

The children left, and Kate came close to pour Bozzy his cup of Daystart. He slipped an arm around her waist and squeezed convulsively.

"Darling!" she said, stroking his bald spot. "You're positively trembling!"

"Wouldn't you be, if you had to take over from somebody you like as well as I like Mr. Kojac? And for no good reason, except he's seventy-five and I'll soon be forty."

Kate pushed away from him, frowning. "Sometimes you're so silly, it scares me. You know perfectly well that if you don't take Mr. Kojac's job, someone else will. He'd rather have it in your hands than in a stranger's, and I'd rather live on his income than on a laborer's. So stop moping and drink your Daystart, while I call a cab."

No help in that quarter, Bozzy

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decided as she left. All Kate could think of was that she'd soon be the wife of a big-shot: the manager — that is, controls setter — of a furniture factory.

Bozzy had never told her how simple the job really was, though he supposed she knew.

You first ordered designs, and then you ordered a poll taken on the designs. A computer tabulated the poll's results and pointed out the design most likely to sell.

You then fed economic data into the same computer, and found out how many units the market could take. You called in the engineers to set up the machines, and the maintenance men to keep them running. In brief, you were errand boy to a bunch of gadgets, with nothing to do but look important.

He was practicing his important look when Kate bustled in and spoiled it by sitting on his lap.

"You're going to do fine today," she said, "and you're going to get off to a good start. I made them show me your cab. It's one of their brand-new battery-electric ones, a sort of mauve that will go with your purple robe. You'll look swell in it."

BOZZY was kissing her when the lobby buzzer sounded three long rings.

"There's your cab," Kate said, rising.

He followed her to the living room. Projected on one wall was a picture of the cabman facing the lobby annunciator, fifty-three stories down. The man was tall, fat, and in need of a shave, yet he wore purple tights with pink and green trim.

Bozzy shuddered. "Who in the world concocted that rig?"

"Your wife, sir," the cabman answered.

"It's beautiful," said Bozzy. "I'll be right down."

He wasn't, though. Kate told the kids he was leaving, and they trooped out of the bathroom to say good-by.

Bozzy could tell Ralph was the one being bathed only because he was naked—all three were equally wet, and equally anxious to embrace their Daddy. He had to make himself a new robe while the cab meter ticked and Kate jittered.

But once started, the drive between balconied buildings and intervening plazas went fast enough. Bozzy wasn't over half an hour late in reaching Mr. Kojac's apartment building.

The old man waited in the street, looking spare, spruce, and impatient.

"I do wish," he said, easing himself into the cab, "that you had a less anti-social attitude.

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Now you'll have to claim I delayed you."

"I'm sorry, sir," Bozzy mumbled. "It's kind of you to take the blame."

He thought it was also typical. He had understudied Mr. Kojac for the preceding two years, and felt there was no one else in the world for whom he could have as much respect.

"Actually, sir," he explained, "I was delayed by the children."

"An excuse, Boswell! Whether conscious or subconscious, nothing more than an excuse! Distaste for today's ceremonial is smeared over your face like so much bread-and-jelly."

Unconsciously, Bozzy wiped his cheeks.

Mr. Kojac laughed. "You're guilt-ridden and that's plain absurd. All young men in your position have to go through exactly the same thing. You must simply make up your mind to do what society requires."

"All I can think of is your kindness," Bozzy blurted. "People should replace those they hate!"

"But the understudy system wouldn't work, then," Mr. Kojac pointed out. "You can't learn from a man who upsets you."

Bozzy nodded miserably.

IN silence, he let himself be carried toward the furniture factory, till Mr. Kojac asked, "Did you bring the stimulants?"

"Oh, yes, sir. Excuse me. I should have offered them sooner." With embarrassed clumsiness, he fished from a pocket in his underwear the pills required by custom. "Here you are, sir," he said in ritual form. "Big pills make troubles little."

Mr. Kojac smiled. "I don't need any," he said gently. "You do. Take one."

"That isn't proper!"

"No one will know. Go ahead."

He would feel like a fool to take a pill brought only for Mr. Kojac's use. He would feel much more like a fool if he broke down during the ceremony—might even lose his job.

He took the pill, finally, and immediately felt sorry. He was still tense and twitchy when they reached the factory.

As custom demanded, everyone was out of sight. Nobody met them at the gate, or observed their silent progress up the escalator to the personnel office. Noiselessly, through empty soundproof offices, they walked together to the ceremonial chamber.

The door they used was the room's only entrance. It was hooked open invitingly. Within was a small conference table of imitation oak, and six chairs of imitation leather. Ceiling, walls, and floor were plastic sheets in

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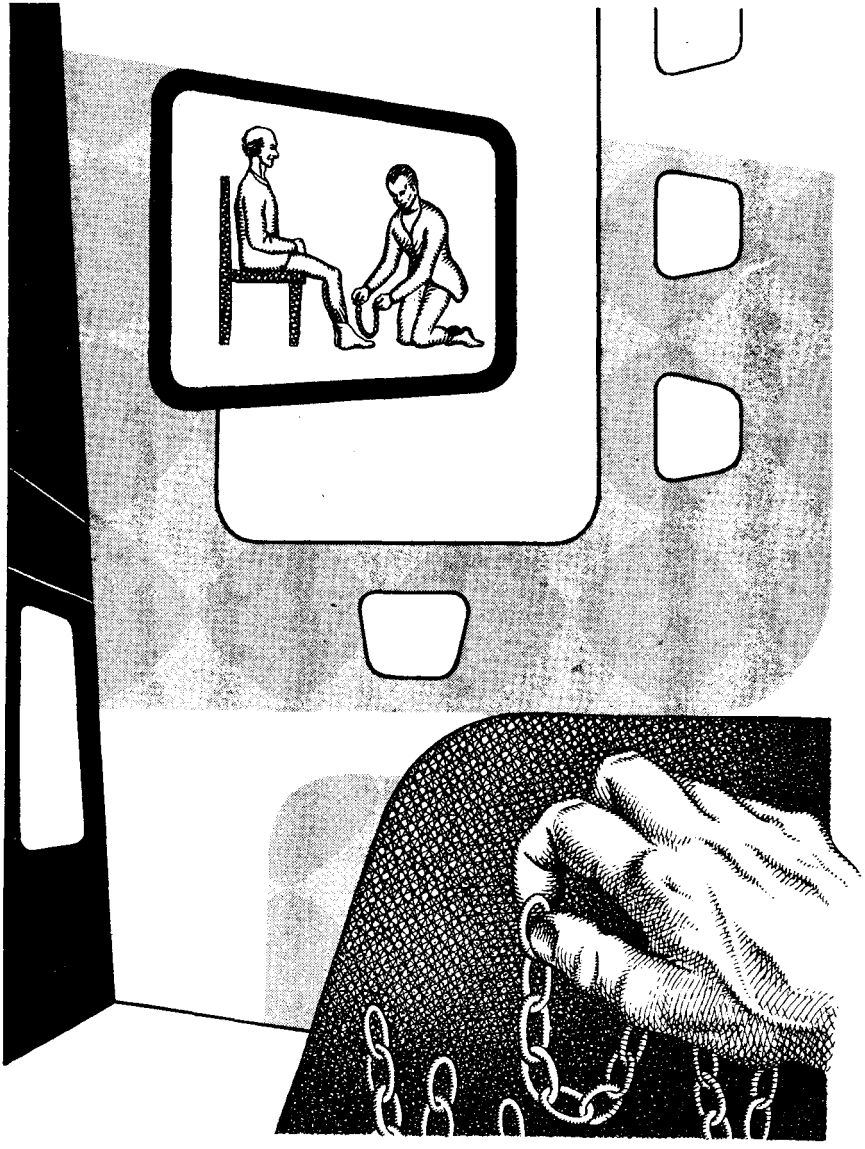

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soft, sandy shades that harmonized with the furniture's rich browns.

On the table were four wristlets, four anklets, and two belts, all made of iron links and stamped with either Bozzy's or Mr. Kojac's name. As he had been told to do, Bozzy picked out and put on his own set while Mr. Kojac rested in the armchair at the head of the table. Then, breathing noisily, he knelt before Mr. Kojac and fastened the old man's anklets.

He rose, grunting. Mr. Kojac held out first the left hand, then the right, while Bozzy put the wristlets on him. Their cheeks accidently touched while Bozzy fastened the belt. He thought of his father and was irrationally tempted to plant a kiss, as if he were four instead of forty.

He stifled the impulse and shook hands instead.

"Good luck," Mr. Kojac said.

THE procedure did not call for that remark, and so, for a second, Bozzy forgot what came next. Then, helped by the stimulant pill, he focused his thoughts, crossed the room, and turned a lighted red switch that glowed by the door.

He heard a muffled clank as iron links froze to the magnetized armchair, sounding the signal for his speech.

"Sir," he intoned, "the Company takes this opportunity to express its deep and heart-felt appreciation of the thirty-five years you have devoted to serving the Company, the furniture industry generally, and that great public, our customers."

Without looking at Mr. Kojac, he bowed, turned, went out, and released the catch holding the door open. It closed automatically, and automatically set in motion the rest of the ceremony.

From somewhere out of sight, fat Mr. Frewne waddled over and briefly shook Bozzy's hand.

"You've done fine," he wheezed. "A little late getting started, but that's to be expected. Everything's fine—just fine!"

Praise seemed a miscue. Bozzy didn't quite know how to answer.

"Sir," he asked, mopping his forehead, "what about Mr. Kojac?"

"Oh, he's all right," Mr. Frewne said. "Those fumes are fast. We can leave the rest to the undertaker."

He slapped Bozzy on the back and pushed him down the corridor. "Come on into my office, boy. I'll pour you a drink—pour us each one, as a matter of fact. And hand over your iron jewelry, son. You won't need that stuff again for thirty-five years."

—DAVE DRYFOOS

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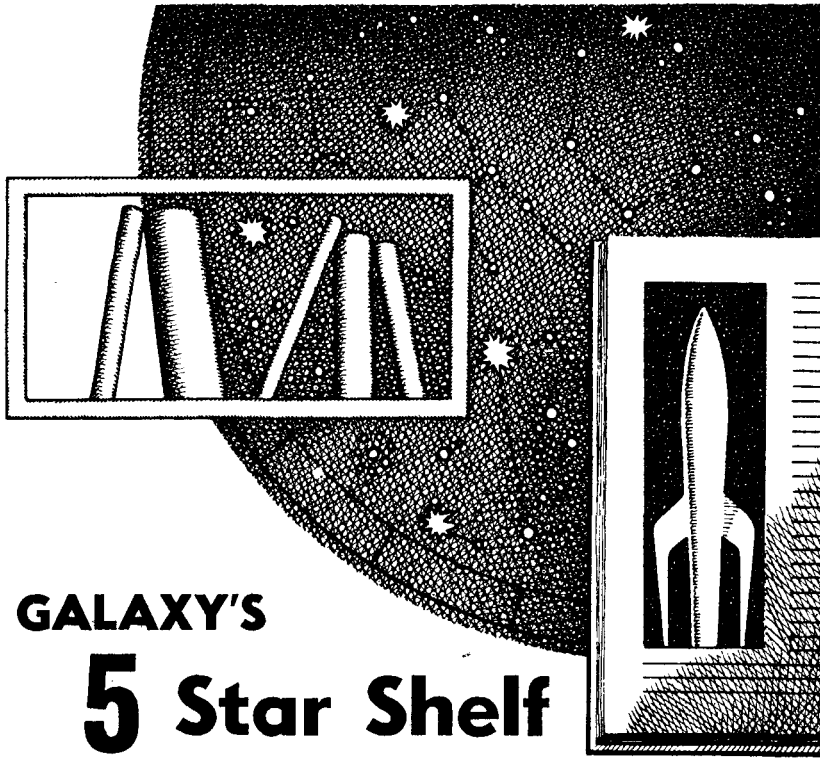

GALAXY'S 5 Star Shelf

CHILDREN OF WONDER, edited by William Tenn. Simon & Schuster, Inc., New York, 1953. 336 *pages,* $2.95

THIS is a practically perfect anthology: a carefully thought out, lovingly planned and charmingly presented patchwork of fantasies about the strangenesses of children.

As Mr. Tenn points out in his delightful introduction, the juxtaposition of literary lights such as D. H. Lawrence ("Rocking Horse Winner"), E. M. Forster ("Story of a Panic"), and A. E. Coppard ("Adam and Eve and Pinch Me"), among others, with science fiction writers like Theodore Sturgeon ("Baby Is Three"), Murray Leinster ("Keyhole"), Katherine MacLean ("The Origin of the Species," a magnificently uncomfortable tale never before published anywhere) and others

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of equal note, shows that—almost unbeknownst to the pundits of the literary reviews—some of our good science fiction writers are turning out literature, too.

Tenn has had the temerarious good taste to include his own "Errand Boy" in the book—just right, too, particularly since it separates two of the more ominous entries, a section from Huxley's "Brave New World" that tells about the human baby hatchery, and Stephen Vincent Benet's verbose but effective narrative poem, "Nightmare for Future Reference."

In addition to those mentioned, the following also have fine tales in this collection: C. M. Kornbluth, Ray Bradbury, Truman Capote, Mary-Alice Schirring, "Saki," Grahame Greene, Jane Rice, Poul Anderson, Lewis Padgett, Judith Merril, Richard Matheson and Wilmar H. Shiras, the last four with stories well known to science fiction anthology readers.

THE DEMOLISHED MAN by Alfred Bester. Shasta Publishers, Inc., Chicago, 1953. 250 *pages,* $3

A LOT of toothless talk going the rounds declares querulously that what science fiction needs is more maturity. It's still for babes, it's too much space opera, etc.

True enough that there is a lot of cheap and bad stuff being written, but there is also *The Demolished Man,* and a few others nearly in its class. (Incidentally, the novel was originally a GALAXY serial, as were many of the recent crop of high-grade books.)

Among other things, this is as fascinating a study of character as I have ever read. Ben Reich, owner of the second most powerful business monopoly in the Solar System, ruthless murderer and bitterly tortured soul, is an unforgettably vivid personality.

The book is also a brilliant picture of society in the year 2301, a society in which every profession and trade has its quota of mind-reading telepaths, most trusted (and hated) of all public servants. From Maria Beaumont's imitation Pennsylvania Terminal mansion, expressing almost immeasurable luxury, to Chooka Frood's Rainbow House, scene of the lowest vices and most brutal crimes, one is given a violently real view of a society in which the neuroses of 20th Century urbanism have been almost infinitely multiplied through extrapolation.

But the strongest attraction of the book is its plot. It is actually a superb murder-detective story in which the murderer (Ben Reich) is known practically from

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the start, but in which the motive was completely misunderstood, thus making conviction of the murderer almost impossible. For he did not really know his own motives—and until those motives were clear, Reich could not be convicted and sent to Demolition; the police's Thinking Machine would reject the evidence and, under Tomorrow's law, that would permit the murderer to go free.

How he is finally trapped into a final recognition of his own basic motives is truly great psychological surrealism.

In an otherwise laudable and lauding review, H. H. Holmes labels such ingenuities as @tkins for Atkins and Wyg& for Wygand as "coy whimsies." π on you, Mr. Holmes, for ignoring language development! Many symbols need only formal inclusion to make them part of the alphabet; in actual practice, they are there already.

But your pedantry is forgiven, for you recognize this as a magnificent novel, which it decidedly is.

NO PLACE LIKE EARTH, edited by John Carnell. T. V. Boardman & Co., Ltd., London, England, 1953. 255 *pages, available from Stephen's Book Service,* 45 *Astor Place, New York, at* $2.75

HERE is the first all-British science fiction anthology, and a distinguished job it is, too. It contains ten stories by nine writers: two by John Beynon Harris, one under the name John Beynon and another under John Wyndham, and one each by Arthur C. Clarke, John Christopher, Peter Phillips, J. W. Groves, William F. Temple, A. Bertram Chandler ("George Whitley"), J. T. M'Intosh, and Ian Williamson.

Every story in the book is top grade.

DESIGN FOR A BRAIN by W. Ross Ashby, M.D. John Wiley & Sons, Inc., New York, 1952. 260 *pages,* $6.00

I HAVE not dared to attempt a review of this epochal book until I could enlist authoritative support from scientific reviews for my belief that it is an amazing step forward in the science and philosophy of the human brain.

Warren S. McCulloch, M.D., in a lead review in *The Scientific American,* writes that Ashby, a British psychiatrist and neurologist, has "laid the foundation for a mechanistic theory of how biological systems adapt which for many years to come will command the respect and guide the imagination of his most formidable critics . . ."

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And, believe me, they will be formidable, since the author thoroughly demolishes the old metaphysical dichotomy between body and soul, mind and brain, and thus arrays against himself the whole world of religion and mysticism.

The book is not easy to read, even though the mathematical theory is tucked away in an Appendix. But, though difficult, its message is so exciting that anyone interested in the theories of cybernetics and advanced psychology, as well as in the more philosophical problems mentioned, will want to struggle through the text for its new concepts and illuminating insights.

The conclusion is that, by developing "ultrastable" types of machines and by combining and refining them, it should be possible (in Dr. McCulloch's words) to produce "a multistable system whose adaptations to the vicissitudes of life have no upper limit except those of our imagination."

In other words, a better-than-human brain.

HELLFLOWER by George O. Smith. Abelard Press, New York, 1953. 264 *pages,* $2.75

SPACE operas are usually pretty unsatisfactory for adult readers, but George O. Smith has now written a grown-up, exciting, well-worked-out space opus that deserves the ultimate commendation of wide reading. By calling it a "space opus," I mean to classify it as straight adventure as against more complex and sociologically slanted space documents like Asimov's *Foundation* series, not to run it down as an empty potboiler. It isn't by any means.

The story revolves around the efforts of Farradyne, an ex-spacebum rescued from the depths by the Solar Anti-narcotics Department, to break up the love lotus, or "hellflower," racket. There are fantastic space flights, hand-to-hand combats, dodges and escapes; there is some remarkably adult and actually quite moving lovemaking and sex psychology; and, when you think back over the story, there is one of the most effectively integrated plots in recent science fiction.

It would be unfair to the reader to tell more than this; the payoff is too revealing a giveaway. Let it stand that "Hellflower," with the exception of some rather hasty tying up of loose ends as the story closes, is a fine and extremely enjoyable job.

THE ROBOT AND THE MAN, edited by Martin Greenberg. Gnome Press, New York, 1953, 251 *pages,* $2.95

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TEN stories, several of them longish novelets, and eight of them B or better. This is a good average, better than most anthologies. There are two stories by Lester del Rey and one each by John D. MacDonald, Bernard Wolfe (best story in the book and the original from which some of the fantastic ideas in his novel *Limbo*—see GALAXY for May 1953—were taken), Lewis Padgett, H. H. (Tony Boucher) Holmes, John S. Browning (not too good), A. E. van Vogt (ditto), Joseph E. Kelleam (fine) and Robert Moore Williams. All on robots, and none heretofore anthologized.

I would like to make a small criticism of the book's planning, hoping Mr. Greenberg will not think it amiss: the chronological development of robots as seen by different writers develops some uncomfortably obvious contradictions. In one story, the Earth has been completely decimated and only robots are left. In the next, there are people aplenty. The result is confusing, to say the least.

I suspect that this problem should lead to a generality on "idea" anthologies: one should never try to tell a *connected story* in such a book. One should, rather, present a variety of alternates, so that none conflict with its neighbors and all add to a rich pattern of different possibilities for the future.

SPACE PLATFORM by Murray Leinster. Pocket Books, Inc., New York, 1953. 167 pages, 25¢

IT is unfortunate that this melodrama for teen-agers, originally planned for hard-cover publication by Shasta Publishers, but not yet issued by them, bears no indication on its reprint cover that it is designed for young people. You start off expecting the usual rich Leinster job, and abruptly find yourself with a pared-down, oversimplified boy's book, perfect for its special market, but hardly for grownups.

The story tells how young Joe Kenmore, with the aid of various cohorts including young Sally Holt (romance) and her stern pa, Major Holt (drama), succeeds in helping to foil ten or a dozen assorted attempts to sabotage the United States' fixed-orbit space station as it is being built in an American desert. Nobody but the U.S.A. wants the station, since it will put the rest of the world under our domination. Of course Joe and the U.S.A. win, the space station flies up to its orbit, and everything is hunky-dory.

This is a good thriller indeed—for youngsters.

—GROFF CONKLIN

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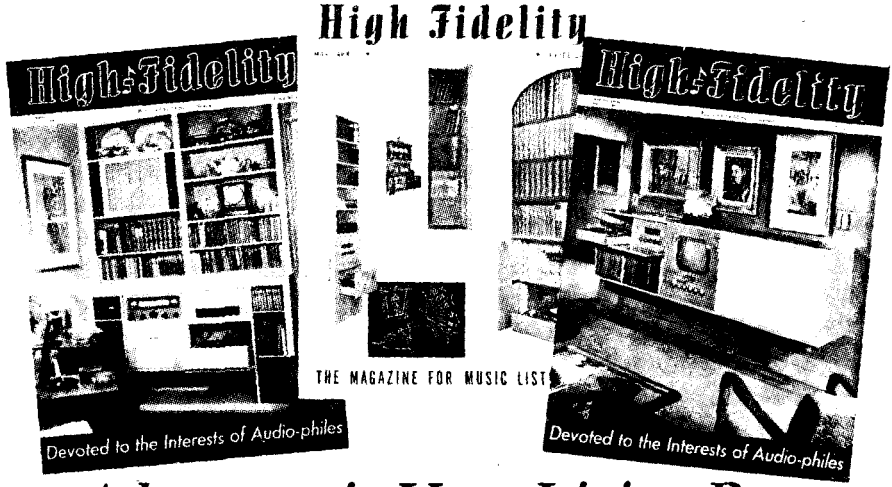

Adventure in Your Living Room

"Stop!" cried the Publisher, in honest agony, "This is an ad we're writing, not a sociological report!"

"I still say," repeated the Promotion Manager, "the two most exciting cultural phenomena in America today are . . ."

"Not all over again!" muttered the Publisher.

". . . Are science fiction and high fidelity home music. People interested in one are almost bound to be interested in the other."

"Maybe *you* are," growled the Publisher, "but who *else?*"

"Me," said the Associate Editor, from his corner. "I've read every issue of *Galaxy* since the first. . . Ditto every issue of *High Fidelity*. And I own the best amplifier, record player, FM tuner, and speaker-system I can afford. As a snap analysis, I think the appeal is to people who want adventure in their own living rooms."

"Snap me another analysis, then," said the Publisher, "How do we sell your fellow-Martians on *High Fidelity?*"

"Just tell 'em about it," said the Promotion Manager, simply. "We've got a beautiful magazine. This issue, 132 pages, firm, big, and slick. Nearly 200 record reviews, by experts in both music *and* sound. Tested-in-the-home reports on the latest hi-fi equipment — speakers, preamplifiers, tape recorders, everything. Picture pages, full of ideas for home music installations . . ."

"And listen," said the Associate Editor, "these *Galaxy* readers are loyal. If we get response from this ad, we tell 'em, we'll run another."

"Say, that's a low-down trick," said the Publisher, brightening. "Let's try it. Write the copy. I'll call up and reserve a page."

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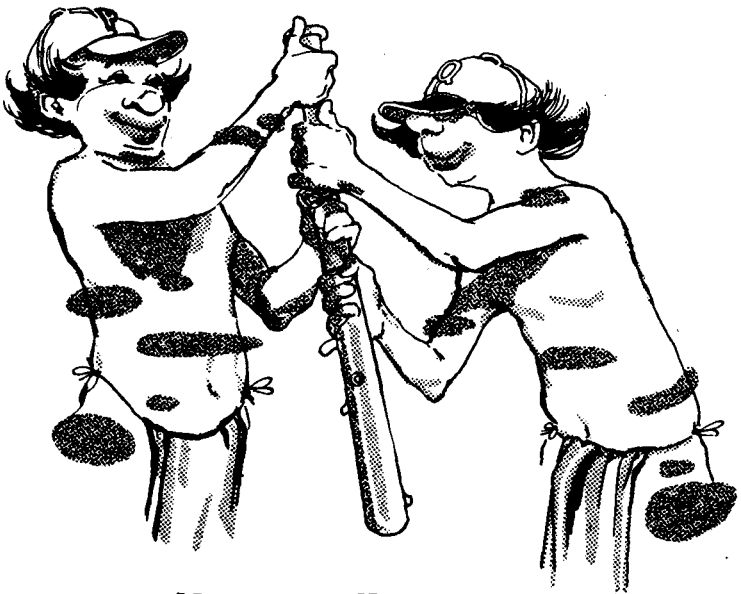

Half Past Alligator

By DONALD COLVIN

BILL BRADLEY shooed away the group of Quxas that had surged over the first-base line. With broad grins on their flat, piebald faces, they moved away—in the wrong direction, of course—and squatted in a smiling semicircle around Pat Reed, who was playing third. This was bad, because Reed was a fifty-fifty player: It was an even chance whether he got the ball or the ball got him. One of the half-domesticated thrags

Illustrated by BARTH

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broke loose and cantered across the outfield with its peculiar five-legged gait. In the hubbub, Ray Bush stole second. Nobody seemed to notice.

Sighing heavily, Bill returned to the mound and whiplashed in a fast one, tight across the letters. The hitter got only a small piece of it; a pop fly sauntered toward left field. Judging it to a nicety, Gust Mustas came racing in, evaded a tethered thrag, leaped a hole some Quxa had dug and forgotten, and made a shoestring catch, retiring the side. The Quxas cheered deliriously.

Bill trotted off the mound. For a moment, the thrill of the game held him. This was the way things should be: The feel of smoothly flowing muscles, the thudding sound of horsehide hitting a leather glove, the weight of a bat in your hands in your first ball game after clambering over and scrabbling in an unexplored planet for fourteen months.

Then he caught sight of Candace Mathews, walking among the pneuma-huts that served as the outpost camp for the expedition. Gloom enveloped him again, surrounding him like a dank fog.

FOR fourteen long months, Bill had feasted on the memory of Candy Mathews, on his recollection of her torquoise eyes and cascading brown hair, on the remembrance of her soft lips on his last night under the four moons of Vensor III.

Today she had arrived with the seventy-odd men and women who comprised the appraisal unit, the final group of the planet's explorers. He had looked forward like a schoolboy to her coming. And, like a schoolboy, he had suffered black despair when his dreams were shattered.

For the Candy Mathews who got off the shuttlebug at Camp Outpost was not the Candy Mathews who had said soft words on Vensor III. She was, instead, a self-assured young woman, somehow harder, who felt only an indifferent tolerance toward a tall young man named Bill Bradley, and an all-consuming, hero-worshiping infatuation for a newcomer, a dapper walking brain, Vance Montgomery, one of the council's smart boys, with the title of planet evaluator.

"He's simply wonderful," she had said. And the joy of life had gone out of Bill Bradley.

The appraisal group brought in athletic equipment and Bill's men spontaneously declared a holiday, their first on the planet. Baseball was the order of the afternoon and they shanghaied a not unwilling Bill to pitch. He should, he knew, be laying out reports for Montgomery to study. He did not particularly want to

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be with Montgomery.

Bill sat on the xetal log that served as a bench.

One Quxa was bent over, examining first base. He made a colorful sight. The first baseman slapped him jovially on the loin cloth to move him.

The owner of the thrag caught up to it and was struggling manfully to lead it away. The five-legged beast defied his efforts, rearing and dragging him. A dozen Quxas stood nearby. Their sympathies were obviously with their fellow-Quxa, but they made no move to help him.

Reed was on the bench next to Bill. He had come in with the appraisal group.

"Your vivid friends," he said, cocking a thumb at the Quxas, "don't appear too bright."

"They're smart enough," said Bill. "Almost as intelligent as we are. It's just that they've never risen above a herd culture."

"Look," said Reed. "I'm a silviculturist. Give me a hunk of wood and I can tell how long it took to grow, what it's good for, where it can be raised and how much board and profit can be made out of it. But this kind of talk throws me. Try another wave-length."

"Socially, they're like the seals or penguins back on Earth. They like to gather in groups. The things they can do individually, they do well. But they don't know how to help each other. That's beyond them."

"Don't understand the meaning of cooperation?"

"The word isn't even in their language. I've seen forty of them standing around, fretting and stewing, while the horals killed off one of their fellows."

"What are horals?"

"The other dominant life-form here. Nasty brutes, like big upright ants with tentacles. Stand about as high as my chest. Most malignant things I've seen. One Quxa can handle any horal, maybe even two or three. But the horals hunt in packs. Good-by Quxa."

"Killing them off, are they?"

"This is the last big concentration the Quxas have left. In another hundred years, there'll be no more Quxas."

THEY looked again at the natives. The Quxas were something to see—human in form, although somewhat shorter than Earthmen; their skins were blotched and dashed with patches of vivid colors. Antiquarians talked of their resemblance to the ancient circus clowns, a likeness furthered by their broad, flat faces and habitual grins.

"Sort of hate to see them disappear," Bill said glumly. "They're happy, good-natured

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creatures. In their whole race, I know only one who's mean. We've done our best to help them. But if they won't cooperate even in a matter of life and death, what incentive can you offer them?"

An elbow dug into him.

"Up to the platter, dream boy," said Gust Mustas. "A hit means two runs."

Selecting a bat, Bill made his way to the plate. In the middle distance, Vance Montgomery emerged from a hut. Candy went to him eagerly, put a hand on his arm. A deep rage engulfed Bill.

The first pitch was a curve that failed to break. As it came fatly over the plate, Bill swung angrily. The ball rocketed up and away, past the infield, over the head of the desperately running left-fielder and dropped toward a sure home run.

Then a curious thing happened. One of the Quxas darted away from the gabbling group along the foul line, his short legs churning over the uneven ground. As the ball sank, he dove, plucked it out of the air with one broad hand, turned a somersault and came up with it, grinning. It was an impossible catch and the Earthmen joined the Quxas in applause. Still clinging to the ball, the Quxa made little bobbing bows of acknowledgment.

"Throw it in!" shouted Bill.

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The Quxa stood motionless. "Throw it in, Adlaa!" Bill urged. He went through a throwing motion.

The Quxa nodded comprehension. He went into a violent windup. His left foot came up, his upper body went back, his right arm snapped in an arc. The ball flew from his hand, straight and fast.

In the wrong direction, of course.

The pack of Quxas pelted after it, shouting, picked it up and threw again. To his surprise, Bill found himself pounding after them, bawling fruitless pleas, aware that he looked foolish, but, in his rage, not caring. He closed in on them on the fifth throw and his fingertips touched the ball. He succeeded only in deflecting it. There was a dull *thunk* and the game was over. The ball had struck Vance Montgomery, planet evaluator, squarely in the left eye.

Three things were said then to Bill Bradley.

One was by Montgomery as he handed back the ball. "I was not aware, Bradley, that the job of camp leader entailed joining the rowdyism of the native races."

One was by Candy Mathews, hopping with anger. "You're a barbarian, Bill Bradley. Monty might have been badly hurt."

The third was by a clot of Quxas, crowding eagerly. "Play ball! Billbrad, more play ball!"

To the first two, Bill did not reply. To the Quxas, he said one word, "Nuts!" and dolefully followed Montgomery into the headquarters hut.

IN spite of his natural prejudice against Montgomery, Bill was forced into a reluctant admiration for the way the man worked.

Montgomery's task was to recommend whether the planet should be marked for immediate colonization, placed on a reserve list for future expansion, or be left strictly alone as unworthy of occupancy. He tore through Bill's reports like a small child through a bag of jellybeans. His questions, if pompous, were pointed.

Within twenty-four hours, ready to leave for the main camp, he called a conference.

He stood before the group, as dapper as a man can be with a rainbow bruise under one eye, complacently listening to the resonance of his own voice. Beside him, Candy nodded worshipful agreement. Bill grumped in a corner.

For a full forty-five minutes, Montgomery outlined additional data he wanted gathered. His voice was faintly chiding, implying by its tone that anybody but a dolt would have obtained the information long ago.

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"And now," he said, "we come to the question of the humanoid denizens of this planet—the so-called Quxas." He fingered his black eye. "Many persons might conclude that the Quxas are not worth saving; and in themselves, they are not. However, my preliminary conclusions—based, unfortunately, on insufficient data—lead me to believe that this planet will be used for colonization in about five hundred years. It would be very convenient then to have a dominant life-form friendly to the galactic humans and capable of being integrated with the colonists. Some method of preserving the Quxas must therefore be worked out. In this, the advance group has failed lamentably."

He paused, glanced around triumphantly.

"How do I propose to achieve this? By a historical method. What do nations do when they are in peril? They call upon a single man, place themselves under him and let him lead them out. When the ancient western civilization was in its greatest danger after the fall of Rome, the people gathered around the strong men, made them kings and dukes and earls, and were saved from barbarism.

"I shall do the same for the Quxas. The Quxas shall have a king."

His eyes sought out Bill.

"My acquaintance here has been short. I must rely on advice. Bradley, whom would you recommend as king of the Quxas?"

"Well," said Bill slowly, "Moahlo is the most intelligent. He's good-natured and kindly. He has a lot of artistic ability. Some of his carvings are being taken back for the Galactic Folk Museum."

"An artist!" said Montgomery in disgust. "Well, let's have a look at him."

MOAHLO was finishing a figurine near one of the meandering paths that the Quxas had worn by habit, not design. A bemused group of natives looked on admiringly.

Down the path came Ratakka, the biggest of the Quxas, his shoulders proudly back, his face set in the truculent scowl. Bill knew and disliked him, and apprehensively felt sure the peaceful scene would be destroyed. Alone of an amiable, tolerant race, Ratakka was perpetually ill-tempered, the rankling product of Lord knew what alien genetic accident or trauma.

Ratakka found his path obstructed by the carving. Callously, he brought his foot down on the delicate figurine, crushing it to splinters. Moahlo sprang up in gentle protest. Ratakka gave him

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the back of a meaty hand that knocked him off his feet. Two spectators indicated disapproval. Ratakka smashed their heads together and strode on.

"To save a culture, Bradley," said Montgomery, who had watched the brutal display with admiration, "you need strength, not delicacy or feeling. That man shall be king of the Quxas."

He ran after Ratakka.

The members of the outpost staff looked at Bill in dismay. He shrugged sadly and walked out of the headquarters hut. At the doorway, Adlaa was waiting for him with the same old plea.

"Play ball?" he begged. "More play ball, Billbrad?"

In his despondent mood, Bill did not care.

"All right. I'll throw the ball to you and you throw it back to me."

"Quxas not do that."

"It's just as much fun to throw the ball in one direction as in any other direction," Bill explained patiently. "Unless you throw it back, forget it—no play ball."

Adlaa thought seriously. "Hunky dokey. Want play ball."

They were tossing it back and forth in the middle of a cheering group when a half-track passed, taking Montgomery, Candy and Ratakka to the main camp. The look that the girl gave Bill was disdainful.

"There's a gaggle of natives outside in assorted shades," said Pat Reed the next day. "They want to play ball. Moahlo's at their head. He carved a bat."

"Tell them to beat it. We're busy."

"Let's give them some fun while we can. They won't enjoy life much after King Rat gets back here."

"That's the truth," Bill agreed. "All right."

"I WISH your painted idiots would get over their baseball mania," complained Rudy Peters, the mineralogist, two days later. "Look me over carefully, will you, Bill? I think my throwing arm just dropped off."

"They're nutty about it, all right," Bill Bradley said. "Too bad it couldn't have been about something with some economic value."

"Economic value, the man wants. Okay, I'll talk economic value to you. Bet you fifty units I can make a better ball team out of these freaks than you can."

"Well, make it thirty."

"You're on, sucker. I've lined up the sweetest shortstop that ever spit in a glove . . ."

"Here's your thirty," said Rudy Peters a week after. "How was I to know that shortstop wouldn't throw the ball to anyone except the center-fielder?"

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"Team play's the stuff, lad," said Bill Bradley. "Stress team play. Twenty-five, twenty-seven, twenty-nine, thirty. Exactly right. Another lesson at the same price?"

He was refused, but never on an exploration had Bill Bradley had so much fun. And never, he reminded himself grimly, had he got so little work done. The Quxas were neglecting their skimpy food plots in their eagerness to play. They were getting lean. Finally, with reluctance, Bill called a temporary halt to baseball.

"Billbrad say no baseball until work done," said Moahlo sadly to Adlaa. "Sometimes Billbrad talk like southpaw pitcher."

Adlaa was trying to cultivate his food plot with the help of a thrag. The beast was of independent mind. It dragged Adlaa in eccentric ovals, in defiance of agricultural needs.

"Adlaa want finish work, play baseball," the Quxa commented. "Thrag no play baseball, say nuts to work. Adlaa be old like Old Hoss Radbourne before work done."

Moahlo contemplated. "Adlaa have trouble his thrag. Moahlo have trouble his. Moahlo help Adlaa his thrag and Adlaa help Moahlo his. Get work done more faster."

Adlaa dismissed the revolutionary thought. "Quxas not do."

"We play baseball run down play," argued Moahlo. "Play together. You throw ball me. I throw ball you. Yippee. Man out."

"Same team. Old pals. Want sing team song?"

"Want play team with thrag."

Adlaa considered the matter in this new light. "Like ball game," he said at last in amazement.

"Sure. You, me be us together. Make thrag look like busher."

They both took hold of the thrag. Unable to resist their combined strengths, the beast submitted docilely. They began to work.

GLANCING out from his labor in the headquarters pneumahut, Bill saw the incident in happy surprise. Perhaps, after all, his stay here might produce something to help the culture that Montgomery would introduce upon his return. He had no doubt of Montgomery's success.

Neither, for that matter, had Montgomery. At the main camp, things were going swimmingly.

The camp lay on the very fringe of the Quxa territory, but, by an arduous hunt, Ratakka had captured eight wandering Quxas to whom he immediately set about teaching the duties of subjects. His method was simple—the Quxa followed his orders,

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which he obtained from Montgomery, or the Quxa was knocked down. If he still refused, he was knocked down again. Within three weeks, Ratakka had them doing things no Quxas ever had done before. They performed them reluctantly and sullenly, but they did them.

Seeing the result, but not the means, Candy was enthusiastic.

"They're working together!" she cried. "Oh, Monty, what will the Quxas do to reward you?"

"Oh, they'll probably make a culture god of me," said Montgomery, managing to look modest. "Like the Greeks did to that Martian, Proma Ss Thaa, who taught them the use of fire."

As time went on, though, the girl began to have doubts.

"But they're doing everything for Ratakka," she protested. "As far as they're concerned themselves, they're more wretched than before."

"That's the way feudal cultures are built, my dear," Montgomery assured her. "The king gives them law and a fighting leader. In return, the subjects take care of his bodily comfort."

"But they look so unhappy!"

"In saving an inferior race, we cannot be concerned too much about the happiness of a few miserable members. Perhaps in three hundred years or so, they can afford happiness."

And finally an incident happened to complete her disillusionment.

One of Ratakka's morose subjects managed to slip the shackles with which he was bound at night and make a bolt for freedom. The king pursued him relentlessly, brought him back and then beat him, coldly and cruelly, slugging and gouging and kicking.

Ashen-faced, Candy moved to interfere; Montgomery restrained her.

"We're saving a race," he said. "You can't make an omelet without breaking a few eggs."

Candy turned and ran sobbing to her quarters, unable to dispel the memory of the writhing body on the ground.

THE next day was the day to move equipment. It was a policy of the expeditions to leave their wornout machines for the most friendly of the native races, who could dismantle them and use the parts. The equipment not worth toting back to Earth was to be taken to the advance camp, where the Quxa center was. Montgomery also planned that day to take Ratakka to his kingdom.

A few minutes ahead of the motorcade, Candy slipped out, got into a battered half-track and started driving the eighty

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miles to the advance camp. For the first twenty-five miles, she told herself that her eagerness was because it was a nice day and she wanted to get out of camp.

For the next twenty-five miles, she called herself a liar.

For the third twenty-five miles she gave herself up unashamedly to thinking about Bill Bradley: his smile, his gentleness, the awkward grace of his lean body. Not a man to set a planet on fire--but how pleasant and restful to have around!

She wondered if he would forgive the way she had acted. Somehow she was sure he would.

The narrow vehicular trail ran through a grove of fernlike trees. It's just over the rise, Candy thought, just over the rise and down into the saucer, where Bill is waiting . . .

The half-track struck a rock, lurched, threw a tread and went off the road, out of control.

That did not matter especially, for the Quxas could use the material very well where it was. Candy went forward briskly afoot. A fallen branch brushed her ankle. Unheedingly, she kicked it away. She began to reconstruct Bill, feature by feature: the way his hair swirled on his forehead; his eyebrows, arched and regular; his eyes, wide, deep-seated, with inner pools of merriment; his nose, straight and rather . . .

Another branch caught her. She lifted her foot to free it. It did not come free. Another tentacle moved around her, pinioning her right arm to her side. She whirled in terror and found herself in the grip of the horals.

THERE were a dozen of the horrors, their antenna ears erect, mandibles open. They exuded an acid odor, a sign of hunger. Candy screamed. She fought to reach her pistol, strapped to her right hip. More tentacles stopped her. She screamed and screamed again, throwing her body to shake off the grip, trying to kick with her feet.

There was a movement in the road at the top of the rise. For a moment, elation surged in Candy, almost stifling her. Perhaps some expedition member had heard her, was hurrying to her rescue. Then she saw that the newcomers were Quxas. Hope vanished, leaving her limp and hollow. To be killed by these horrors was bad enough, but to be killed in the presence of a group of piebald morons, who would stand and watch and moan, but not lift a hand . . .

In her agitation, she did not notice that the Quxas were nine in number and wore baseball caps. They drew short clubs,

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shaped like bats.

"Kill the umpire!" they shouted, hatred born of diamond conflicts in their cry. "Kill the umpire!" they yelled and charged.

IN military formation, they clubbed their way through their enemies, battering and smashing until Candy was free, with a dozen dying horals on the ground, their tentacles contracting and writhing. The Quxa leader made his bobbing bow to her.

"How do," he said politely. "We dip them in calcimine vat, you bet. We hang them out like wash. Now we give team yell."

The Quxas put their arms around each other's shoulders. In unison, they chanted:

"Hoe tomata; hoe potata
Half past alligata,
Bum, bum, bulligata,
Chickala dah!
Pussycats! Pussycats!
Rah! Rah! Rah!"

"Pussycats," the leader explained to Candy, "are honored animal on planet where Billbrad is head cheese."

"I'll bet you play baseball nicely," Candy said.

Woe broke forth on nine broad faces.

"Misfortunately not," confessed the captain. "Thirty-three

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teams in Quxa town. Pussycats in thirty-third place." He brightened. "Go ivory hunt now. Catch nine new Quxas. Teach 'em baseball. Then maybe we beat 'em and not be in cellar any more."

Together, the team bobbed politely to Candy and trotted down the road.

Happily, Candy went up the rise, then stopped in astonishment, looking at Quxa town.

Gone was the straggling, haphazard settlement, with the flimsy huts and untended starvation patches where individual Quxas tried to raise their own food. Instead, building sites were laid out in straight, broad rows, and Quxas were working, three and four in a group, raising substantial homes of timber. Others were surrounding the settlement with a wall of brambles, impenetrable to horals. Teams of men, two to a thrag, were plowing, preparing large fields for tillage. And down the side of the settlement, affectionately tended, ran a line of baseball fields.

Just off the road, a Quxa squatted, baseball cap on his head, watching a crude sun dial.

"Nice day for game," he greeted Candy.

SPEECHLESS with surprise, the girl made a dazed questioning gesture toward the improvements.

"Billbrad do it," the Quxa informed her. "He tell us how. Work one by one, he say, work all time to fill belly, maybe fill horal belly instead. Work all by all, do more quick. Have time in afternoon. Batter up! Sock it, boy! Wing it home, he sliding!"

The sun's shadow touched a peg.

"Five minute!" bawled the Quxa.

The laborers quit work, put away their tools. The farmers herded their thrags into a strongly constructed corral. The natives gathered in knots at the settlement edge and looked longingly at the baseball fields.

"Yestday I fool Billbrad," confided the Quxa. "I hide ball, catch him off second. Billbrad get all red face and say—"

"Never mind what Bill said," Candy interjected hastily.

The shadow touched another peg.

"Play ball!" the Quxa yelled. "Play ball! Play ball! Play ball!"

He sprang up, produced a baseball glove and spat into it reverently.

"I go play now. You come see. Get scorecard, know players."

He looked at Candy hopefully.

"'Specially me," he added.

Out of the moil of Quxas came the lank form of Bill Bradley. He spied the girl, whooped and came running to her. For a few mo-

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ments they talked at once, in an incoherent and ecstatic jumble. Then Candy, catching control of herself, cited in admiration the change in the Quxa village.

"And you've done all this!" she concluded.

"I didn't do anything!" Bill protested. "They like to play baseball and this sort of happened. We're getting representative government into action now. Each team elects a captain and the captains are the town council. Tonight they're going to vote on naming the settlement Brooklyn."

"You know," said Candy, "I'll bet they'll make you a culture god."

THE tanned face of Bill Bradley took on the rose hue of a blush.

"Well, Moahlo carved a statue and they've put it in front of league headquarters—that's their city hall," he admitted uncomfortably. "It doesn't look much like me. I've got six arms because they wanted me batting, pitching and catching a ball all at the same time."

Candy slipped a hand into his.

"Is there a place around here," she asked in a small tone, "where a culture god can take a girl and —well, talk to her?"

"Is there!" said Bill. "You just come with me . . ."

A heavy object bumped into him. He whirled at the touch.

"Oh! Hi, Ratakka," Bill said in a flat voice.

Montgomery's king had returned to his subjects. He was alone —his captives having escaped on the ride over—and he was in vile temper. Glaring evilly, he motioned at the baseball players. He was recalling an advice of Montgomery: "Whatever your subjects like to do most, do it better than they can. In that way, you will get their respect and find it easier to take over."

"What that fool doings-on?" snarled Ratakka. "Ratakka do, too."

Bill's already sagging spirits sank again. With Ratakka's strength and reflexes, the great brute undoubtedly would become the star of stars, gathering admirers to himself and destroying all the pleasant prospects now so happily started. Still, it was Bill's duty to give him every chance . . .

"I'll see what team has an opening, Ratakka. Perhaps you'd better bat seventh for a few days. Then you can move to the clean-up spot."

The giant stopped him. "Ratakka not ordinary Quxa; Ratakka a king. Ratakka not play like those serfs. Want special job."

A wild thought struck Bill. On the playing fields were more than two hundred Quxas, most of them with a justified and carefully

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nurtured dislike for the surly slab of muscle before him. In the old days, they could do nothing individually against him.

But the Quxas had learned to fight as a team. If he could only give them the shadow of an excuse, trap Ratakka into rousing their joint anger, take advantage of the predjudices of their newfound love for baseball, then Ratakka would get the reckoning that he deserved, the days of his supremacy would be over, the threat of his tyranny would be removed from a happy race.

BILL grinned broadly. "Sure thing, old pal," he said.

He took off his own baseball cap and put it backward on Ratakka's head. He signaled for someone to bring over a mask and chest protector.

"There's only one of these at each playing field," Bill explained. "In a way, he's boss of the game. Are you sure you want to do it? Sometimes the players argue with you."

"Anyone argue with Ratakka," the giant said, raising a huge fist, "Ratakka knock 'em down. Ratakka a king, boss of game."

"Okay, boy, you asked for it," Bill said.

He thrust a whiskbroom into Ratakka's hand.

"You can be umpire," said Bill Bradley. —DONALD COLVIN

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DELAYED ACTION

By CHARLES V. DeVET

IT was just a hunch. Johnson knew that, but his hunches had often paid off in the past, and now he waited with a big man's patience. For five hours he sat in the wooden stands, under the rumpled canvas the concessionaires had put up to protect the tourists from Marlock's yellow sun.

The sun was hot and soon Johnson's clothing was marked with large soiled patches of sweat. Now and then a light breeze blew across the stands from the native section and at each breath his nostrils crinkled in protest at the acrid smell.

This planet gave him the perfect chance to commit the perfect crime — only he couldn't remember just what it was he had committed.

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Illustrated by DICK FRANCIS

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Marlock wasn't much of a planet. Its one claim to fame was its widely advertised Nature's Moebius Strip. For eighteen months of the year—nine months of sub-zero cold, and nine months of sultry, sand-driven summer—the only outsiders to visit the planet came to buy its one export, the fur of the desert ox. But during the two months of fall and two months of spring the tourists poured in to gape at the Strip.

Idly, for the hundredth time, Johnson let his gaze run over the tourists lining up for their "thrill" journey out onto the Strip. Most of them wouldn't go far; they only wanted to be able to say they'd been on it. They would build up some pretty exciting stories about it by the time they returned home.

There was no sign of Johnson's man.

THE party started out onto the Strip. At the first sensation of giddiness women squealed and most of them turned back. Their men came with them, secretly relieved at the excuse.

Johnson watched disinterestedly until only two remained: the young couple he had designated in his mind as honeymooners. The girl had grit. Perhaps more than the young fellow with her. He was affecting bored bravado, laughing loudly as the girl hesitated, but white streaks had appeared along his jawline and across his temples as he waited his turn.

The young couple had gone far enough out now so that they were in the first bend of the Strip's twisting dip. Already their bodies were leaning sharply, as the mysterious gravity of the Strip held them perpendicular with their pathway. From where he sat Johnson could read nausea on their faces.

When they had followed the Strip around until they were leaning at a 35-degree angle, the girl seemed to lose her nerve. She stopped and stood gripping the guide rope with both hands. The boy said something to her, but she shook her head. He'd have to show his superiority now by going on, but it wouldn't be for much farther, Johnson was willing to wager.

The boy took three more steps and paused. Then his body bent in the middle and he was sick. He'd had enough.

Both turned and hurried back. The crowd of tourists, watching or waiting their turn, cheered. In a few minutes, Johnson knew, the kid would be thinking of himself as a hero.

Suddenly Johnson straightened up, having spotted a new arrival, who gripped a tan brief-

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case tightly under one arm, buying a ticket. He had bulky shoulders and a black beard. Johnson's man had come.

When he saw the bearded man go out with the next bunch to brave the Strip, Johnson rose and walked rapidly to the entrance. Elbowing his way through, with a murmured apology, he joined the waiting group.

A thin-faced odd-job man opened the rope gate and they shuffled through. The group must have walked fifty paces, with the bearded man well up in front and Johnson somewhere in the middle, before Johnson's stomach sent him its first warning of unrest. Most of those ahead had stopped and Johnson threaded his way carefully past them.

Another twenty-five steps and he left the others behind. All except the bearded man. He neither paused nor looked back.

Johnson's stomach had drawn up into a tight knot now, and his head was beginning to feel light. There was a faint ringing in his ears.

By the time he reached the end of the guide rope, nausea was creeping up from his stomach and into his throat. This was as far as it was supposed to be safe to go; the advertising literature had it that here was the point of no return. Up ahead his quarry was walking half doubled over, weaving back and forth, as though he were intoxicated. But he did not pause.

Johnson turned to look back, and felt his breakfast fighting to come up. From his perspective, the ground and the spectators watching him had swung to a position almost perpendicular to him. He felt that he was about to slide off into space. A wave of vertigo swept over him, his legs folded and he fell to the ground —sicker than he had ever been before in his life. Now he knew why the man ahead never looked back.

For a moment Johnson wondered whether he should give up. But, even as he debated, tenacity pulled him to his feet and forced him on.

And now something new was added to his vast discomfort. Tiny twinges of pain, like small electric shocks, began shooting up his legs, increasing in intensity with each step he took. The pain built up until the rusty taste of blood in his mouth told him that he had bitten into the flesh of his lower lip.

Johnson's only consolation now was the thought that the man ahead of him must be suffering worse than he. At each step the pain increased its tempo, and the sound within his head grew to a battering roar. Although he felt himself at the last frayed ends

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of his vitality, he managed to stagger on.

Abruptly he realized that he had very nearly overtaken the man ahead. Through eyes glazed with pain, he saw the other, still standing, but swaying with agony and sickness. The man seemed to be gathering his resources for some supreme effort.

He tottered ahead two more steps, threw himself forward—and disappeared!

If he paused now, Johnson knew he would never be able to move again. Only will power and momentum carried him on. He stumbled and pitched forward. A searing pain traced a path through his head and he felt himself falling.

HE was certain that he had never lost consciousness. The ground came up to meet him, and, with a last effort, he twisted his right shoulder inward. His cheek slid along the dirt and he lay on his side without strength. His legs pushed forward in a steady jerking movement as he fought to quiet his quivering muscles.

Gradually a soothing lethargy bathed Johnson's body. His pains vanished, and the sickness left his stomach.

But something was wrong—terribly wrong!

Slowly he climbed to his feet and stood looking about him. He was still on the narrow arm of the Strip. On either side of him banks of white clouds, with the consistency of thick smoke, billowed and curled about the Strip—but somehow they left its pathway clear.

Johnson shook his head. The wrongness, he guessed, was in his own mind. But he was unable to determine what it was. Desperately he marshalled his scattered thoughts. Nothing. He took one groping step in the direction from which he had come—and staggered back from a wall of pain as tangible as a concrete structure.

He had no choice except to go forward. There was something he must do, he realized, but what was it? With the question came the answer to what was troubling him.

His memory was gone!

Or, at least, a great gap had been torn through it as though carved out by a giant blade. Briefly, despair threatened to overwhelm him.

"Hold it!" Johnson spoke aloud, and the words sobered him.

All fears became worse when not looked at. He had to bring this disaster out into the open where he could face it; where he could assay the damage. He had always taken pride in having a

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logical mind, with thought processes as clear and orderly as a bookkeeper's ledger. Closing his eyes, he went swiftly over his recollections, placing each in its appropriate column.

When he finished he found the balance extremely unfavorable, but not hopeless. On the asset side he remembered: His name. Donald Johnson. Right now he was on Nature's Moebius Strip, on the planet, Marlock. There was some man he had been following . . . The rest was on the liability side of his balance sheet.

HIS name remained: All other memory of his own identity was gone. There was no recollection of his reason for being on Marlock, or whom he had been following or why. That left him little with which to work.

On the other hand, he mused, he might never be able to get off the Strip, so that didn't matter much. He doubted his ability to stand the stress of penetrating that electric curtain again. His body had been able to take the punishment the first time because the force had built up gradually. Going back would be something else again.

Still he planned his next actions methodically—only in that way could he retain his sanity. He would go forward for one hour, he decided—he checked his wrist watch and discovered it had run down—and, if he found nothing, he would return and take his chances on getting through the curtain.

At the end of ten minutes he sighted land ahead of him. When he stepped off the Strip, he stopped in amazement!

Somehow the Strip had doubled back on itself, and he had returned to his starting place!

To his right was the rough wooden viewing platform, with its green umbrella gone. The stands were empty, and not a person—tourist or concessionaire—was in sight.

As Johnson stood, perplexed, he became aware of numbness spreading over his body. He brought up his hands and watched them slowly turn blue with cold. He realized then, in a burst of wonder, that winter had come to Marlock. Yet it had been spring when he had gone out on the Strip!

"GOOD God, man!" the clerk exclaimed. "Have you been out in that cold without a coat and hat? It must be thirty below."

Johnson was unable to answer. He had run from the Strip—luckily he remembered its location in relation to the town—but it must have been over a mile to the hotel. Now, as he stamped his

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feet and beat at his sides with numbed hands, he breathed heavily, gasping great gulps of air into his tortured lungs.

"Come and warm yourself," the clerk said, leading him over to a hot water radiator.

Johnson made no protest. He let the heat penetrate until it scorched the skin on his back. Only after the coldness left his body and was replaced by a drowsy inertia did his attention return to the clerk.

"Did you ever see me before?" Johnson asked.

The clerk shook his head. "Not that I know of."

Any further investigation would have to wait until the next day, Johnson decided. He was dead tired, and he had to have some sleep. "Sign me up for a room, will you?" he asked.

Once up in his room, Johnson counted his money. One hundred and fifty-four credits. Enough to buy winter clothing and pay his room and board for a week. Maybe two. What would he do if he could learn nothing about himself before then?

The next day Johnson left the hotel to buy warm clothes. The town's only store was a half-block down the street—as he remembered it, one of the big Interplanet Company stores.

Johnson waited until the storekeeper finished with two of the hairy-eared natives before giving his order. As he paid for the purchase, he asked: "Have you ever seen me before?"

The storekeeper glanced at him uneasily, and shifted his feet before answering. "Am I supposed to have?"

Johnson ignored the question. "Where can I find the manager?" he asked, slipping into the heavy coat the clerk held for him.

"Go up that stairway by the door," the clerk said. "You'll find him in his office."

THE manager was an old man. Old and black, with the deep blackness only an Earthborn Negro possesses. But his eyes retained their youthful alertness.

"Come in and sit down," he told Johnson as he looked up and saw him standing in the doorway.

Johnson walked over and took the chair at the manager's left. "I've had an accident," he said, without preliminary, "and I seem to have lost my memory. Do you, by any chance, know who I am?"

"Never saw you before in my life," the manager answered. "What's your name?"

"Don Johnson."

"Well, at least you remember something," the old man said shrewdly. "You didn't come during the last six months, if that'll help any. There've been only two

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ships in that time. Both the Company's. I meet all Company ships. If you came in during the tourist season I wouldn't know."

"Where else could I make inquiries?"

"Son," the old man said kindly, "there's three Earthmen on Marlock, that I know of—besides yourself, of course—the clerk at the hotel, my storekeeper, and myself. If you started asking questions at the hotel, you're at the end of the line now."

Something in Johnson's expression caused the old man to go on. "How you fixed for money, son?"

Johnson drew a deep breath. "I've got enough to last me about two weeks."

The manager hesitated, and carefully surveyed the ceiling with his eyes before he spoke again. "I've always felt we Earthmen should stick together," he said. "If you want a job, I'll find something for you to do and put you on the payroll."

Twenty minutes later Johnson took the job—and twenty years later he was still working for the Company. He worked for them until . . .

JOHNSON was glad when the first twinge of fear came that it brought no panic. Instead it washed through his body, sharpening his reflexes and alerting his muscles for action.

He never ceased to wonder about this faculty he had acquired for sensing the presence of danger. There was no doubt in his mind that it had come into active function through the influence of his environment. But it must have been an intrinsic part of him even before that, waiting to be activated.

A moment before he had localized the source of his uneasiness —an Earthman, following perhaps fifty paces behind him. The one quick glance Johnson had allowed himself told him his follower was above average in height, and lean—with the wiry, muscular command of himself that marked him as a man capable of well-coordinated action.

He fought the rising force of the next "sand-blaster" boiling in from the desert, until he was unable to take a step against it. Then he moved behind a mud-packed arm projecting from the native dwelling at his right. Every building had one of these protecting arms added on; even the concrete buildings in the newer, Earth-built section of the city conformed to the custom. The sandstorms raged intermittently on Marlock through the entire nine month summer season, and could not be ignored, either by visitors or natives.

Johnson huddled against the projection, but the sand whipped

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around the corner and pounded at his back. Fine grains sifted through his clothing and mingled with the clammy sweat of his body. He resisted the frantic urge to scratch his itching, tormented skin, for he knew the flesh would be rubbed raw in a minute and increase the irritation to maddening proportions.

As the "sand-blaster" lost its intensity, he came out from his shelter and walked away as rapidly as the diminishing force of the wind would permit. If he could reach his office before his stalker closed in, he would be safe.

Suddenly a second Earthman, a short length of pipe in his right hand, came out of a doorway across the street and ran toward him.

Johnson realized that here was the source of the warning his intuition had sent—not the man behind him.

FOR a brief instant, he weighed the situation. The man was equipped for assault, but the chances were he was interested only in robbery. Johnson could probably save himself a beating by surrendering his money without resistance. He rejected the thought. A man had to live with his pride, and his self-respect; they were more necessary than physical well-being. Setting his shoulders firmly against the wall, he waited.

The man slowed to a walk when he saw his intended victim on guard. Johnson had the chance to observe him closely. He was a short and dark man, heavy of bone, with the lower half of his face thickly bearded, and sweat making a thin glistening film on his high cheekbones.

Abruptly a voice said, "I wouldn't touch him if I were you."

Johnson followed the gaze of his near-attacker to his left where the lean man he had noted before stood with a flat blue pistol pointed in their direction. He held the pistol like a man who knew how to use it.

"A gun!" the man in the street gasped. "Are you crazy?"

"Better put it away—fast," Johnson warned his ally. "If the native police catch you with that gun, you're in bad trouble."

The lean man hesitated a moment, then shrugged and pocketed the gun. But he kept his hand in the pocket. "I can still use it," he said, to no one in particular.

"Look, chum," the bearded thug grated. "You're evidently a stranger here. Let me give you a tip. If you get caught using a gun, or even having one on you, the police'll slap you in jail with an automatic sentence of ten

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years. An Earthman couldn't stay alive in one of their so-called jails for a year.

"Now I've got a little business to attend to with Mr. Johnson, and I don't want any interference. So be smart and run along."

The smile never left the stranger's face. "Right now," he said, "I am interested in seeing that Mr. Johnson remains in good health. If you take another step toward him, I'll shoot. And, if I'm not successful in evading the police afterwards, you won't be alive to know it."

"You're bluffing," the bearded man said. "I . . ."

"Let me point out something," Johnson interrupted. "Suppose he is bluffing and doesn't use the gun: The odds are still two to one against you. Are you sure you could handle both of us—even with the help of that pipe?"

The man wasn't sure. He stood undecided, then his face showed black frustration. He mouthed a few choice phrases through his beard, turned and walked away.

THE lean man extended his hand. "My name's Alton Hawkes."

The rising whine of the next "sand-blaster" drowned out Johnson's answer. He drew his new acquaintance into the shelter of a sand-arm.

As they hugged the corner,

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they felt a third body press against them. The musky odor, mingled with the taint of old leather, told Johnson that their companion was a native.

The storm eased its force and the two Earthmen raised their heads to regard the corner's other occupant. He was a mahogany brown, almost the exact color of the ankle-length leather skirt he wore. "Man, he stinks!" Hawkes said.

Their visitor spread his hairy, wide-nostriled nose into the native equivalent of a smile. His hairy ears twitched with pleasure and he swelled his chest. "Blee strong all over," he said. "Want him guard?"

"Why not?" Johnson answered, glancing inquiringly at Hawkes. He slipped a coin into the extended brown palm. "Guard us until we get to the big-house section."

"Pale-smells be very safe," the native said.

They left their shelter as the wind died down and started toward the taller buildings of the foreign section. "I must have said the right thing when I said he stinks," Hawkes remarked.

"Telling a native that is the same thing, to him, as calling him strong and virile," Johnson answered. "They admit, reluctantly, that we foreigners have some good fighting qualities, but we're still regarded as unmanly because of our weak odor. Their females wouldn't look twice at either of us."

When they reached one of the few three-story structures in the city, Johnson dismissed their guard. They entered the building and walked down a short corridor and through a door lettered:

DONALD H. JOHNSON
District Manager
Interplanets Trade Company

"To be frank with you," Hawkes said, as he eased his lank body into the chair Johnson offered, "I had planned to learn more about your local activities before I introduced myself. However, I've found in the past that my first judgment of a man is usually right, so I think I'll get down to business immediately." He drew a set of papers from an inside pocket and tossed them on the desk in front of Johnson. "I'm a Company Secret Service man," he said.

JOHNSON raised his eyebrows, but looked at the papers without comment. He glanced up at Hawkes.

"Do you recognize either of the men in the pictures?" Hawkes asked, when he saw that Johnson had no intention of speaking.

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Unhurriedly Johnson picked up the papers and removed a rubber binder. He pulled out two photos and laid them on the desk in front of him. "The bearded one is the man who waylaid me," he said. "Of course."

"Look at both a little closer," Hawkes suggested, "and see if you don't notice something else."

Johnson studied the pictures. "There's no doubt about the first,'" he murmured. "Evidently I'm supposed to recognize the other also." Abruptly he sat erect. "They're both the same man," he exclaimed. "Only in the second picture he's clean-shaven."

Hawkes nodded. "There's a story about those two pictures," he said. "But first, let me fill you in on some background. You know that Interplanets has branches on more than a thousand worlds. Because of this widespread operation it's particularly vulnerable to robbery. But it would cost more than the Company's earnings to post adequate guards on every station. And it would be impractical to depend on the protection of the local governments, many of which are extremely primitive. On the other hand, allowing themselves to be robbed with impunity would be financial suicide."

Johnson nodded. "Of course."

"That," Hawkes continued, "is where the Company's Secret Service comes in. It never lets up on the effort it will make to solve a robbery and bring the perpetrators to justice. And it never quits, once it begins an investigation. That policy has proven very effective in discouraging thievery. During the Company's entire tenure there have been less than a dozen unsolved thefts—and two of them occurred right here on Marlock."

"I was a clerk with the Company at the time of the second," Johnson said reminiscently. "Been with them about three years then. That must have been over twenty years ago. I . . ." He paused and looked down. "I remember," he said. "The picture without the beard . . . That's the thief. The photograph was taken by one of the automatic cameras set up for just that purpose; we still use them. But they never found the man."

"That's right," Hawkes agreed. "That robbery occurred a little over twenty years ago. And the other picture you have was taken at the time of the first robbery—approximately twenty-five years before that."

"But it isn't possible," Johnson protested. "These pictures are of the same man. And there's obviously no twenty-five year spread in age between them. Unless . . ."

"Unless one is the other's

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father, or a relative that resembles him very closely?" Hawkes finished. "Look at the pictures again. There's the same scar on both foreheads, the same pockmark on the right cheek; our special section has even made measurements of the comparative sizes of the nose, ears and other features. There's no possible doubt that the pictures are of the same man."

"HOW do you explain it?" Johnson asked.

"I don't," Hawkes replied quietly. "That's one of the things I'm here to learn. But did you notice this? The man we encountered this afternoon was not only the same as the one on those pictures: he still looks the same. We might, for the sake of argument, grant that a man's appearance would change only slightly in twenty-five years. But when you add another twenty-three on top of that—and he's still unchanged . . . ?"

"If you're certain that he's the man, why don't you arrest him?" Johnson asked:

"Can we arrest a man apparently about thirty years old and accuse him of a crime committed forty-eight years ago—or even twenty-three years ago?"

"I suppose not," Johnson agreed. "What do you intend to do?"

"I haven't decided yet. First I'll have to learn more about the situation here. You can help me with that. Right now I'd like to know something about the native customs—especially in regard to legal matters."

"Their laws are fairly simple," Johnson began. "There's no law against stealing or taking by force anything you can get away with. That sounds absurd by Earth standards, it prevents the amassing of more goods than an individual needs, and makes for fairly equitable distribution. If a native somehow acquires a sudden amount of wealth—goods, in their case—he must hire guards to protect it. Guarding is a major occupation. They do an especially big business during the tourist seasons. In time the pay of the guards will eat up any native's surplus. Either way—by loss or guard pay—the wealth is soon redistributed."

"Can they even kill one another with impunity?"

"No. Their laws are rigid in that respect. In the process of—relieving another of his property, they must neither break a major bone, nor inflict permanent damage. If they disobey, they are tortured to death in the public square."

Hawkes asked, "Who enforces their law?"

"One of the clans. Its members

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are supported in their duties by all the others. And there's a permanent open season on murderers. Anyone, police or civilian may revenge a victim."

"How about the law against carrying firearms?"

"With them, intent is tantamount to commission," Johnson replied. "Only foreigners are ever foolish enough to be caught armed. However, all native laws apply to them also. The only concession the Company has been able to force is that a foreign offender isn't tortured: He's put in jail for ten years. None ever live to come out."

"I see," Hawkes said. "Interesting. However, the immediate situation is this. I've been sent here because the Service received reports that our bearded friend had made another appearance. And we believe it's safe to assume that he's here to attempt a third robbery. Right now we'll have to pass over his trick of longevity. Our problem is to catch him in the act. When do you think he'll make his play?"

"It'll have to be some time before tomorrow noon," Johnson answered. "Under our setup we accept furs from the natives whenever they're brought in. But we pay off only once a year. That way I'm not burdened with guarding money the whole year around. I have well over fifty thousand credits in the safe now. And tomorrow I begin paying off."

"Then we'll have to be ready for him," Hawkes said, "though I don't expect him until tonight. Probably just about the time you're ready to close. He'll need you to open the safe. I can count on your help?"

Johnson nodded.

THAT night as they waited in his office, Johnson turned to Hawkes. "I've been giving some thought to what you told me this afternoon about the robberies. I have a theory that might account for some of the things we don't understand."

"Yes?" Hawkes looked closely at Johnson.

"You've probably heard of our tourist attraction called Nature's Moebius Strip? As far as we know, no one has ever gone beyond a certain point—and returned. Suppose there's a time flaw at that point—and the bearded man has somehow learned about it. Suppose anyone completing the Moebius circle, and returning, finds—say, twenty years have elapsed, while to him only a few minutes have passed?"

"Go on." Hawkes leaned forward intently.

"He makes his first holdup," Johnson continued, "and goes

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around the Strip. When he comes out twenty years later they're no longer looking for him. He leaves Marlock, and during the next five years he goes through the money he stole. He returns and repeats the process. This time the money lasts only three years. Now he's back to try it again. Do you see how that would tie everything up in a neat little package?"

Hawkes smiled, as he relaxed and sat back. "A bit too neat," he said. "Also, you don't have an ounce of concrete evidence to back up your theory."

"That's right. I don't," Johnson agreed.

Outside the door a board creaked. Johnson glanced quickly across the room to where Hawkes sat with a pistol on his lap. Hawkes' eyebrows raised, but he made no sound.

SUDDENLY the door was kicked open and the black-bearded stranger stood framed in the doorway. "Raise 'em!" he barked. The gun in his hand was aimed at Johnson.

The man took two steps into the room. Hawkes shifted slightly in his chair and the gunman's head swiveled in his direction. The slug from Hawkes' pistol made a small blue hole in the upper left corner of his forehead.

The thug's face tipped up,

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shocked and unbelieving. He swayed slowly before he fell backward, his body rigid. His fur cap flew from his head as he struck the floor.

"I thought we'd better play it safe," Hawkes said as he rose and walked over to the fallen man. He slipped his gun into his pocket before he bent and picked up the cap at his feet. He dropped it over the upturned face.

For a long moment the silence held thin as the two men looked at each other. Hawkes stood, wiping his right hand on his trouser leg. Johnson toyed idly with the gun he had picked up from the desk in front of him.

Finally Hawkes let his body sag into a chair at Johnson's right. "This is always a dirty business," he said sourly.

Johnson sat down also. "Did you notice the look on his face when he saw you, and you shot him?" he asked, abstractedly turning the pistol in his hand. "Funny thing. In that half-second before he fell an article I read somewhere flashed into my mind. It seems that during the French Revolution a certain doctor got to wondering just how long a man's brain remained active after his head had been cut off. He persuaded some of his friends who were due to be guillotined to cooperate in a series of tests. Each man was to keep blinking his eyes as long as possible after his head left his body, as a sign that he was still conscious. The doctor counted as high as six winks."

"Very interesting, I'm sure," Hawkes said guardedly. "But a bit morbid, isn't it?"

"I was wondering," Johnson went on as though he had not heard the other, "whether he was still conscious for that instant after you shot him. And if that brought the look of surprise to his face."

HAWKES turned in his chair to face Johnson fully. "You're driving at something," he said sharply. "Get to the point."

"Personally I've wondered at a few things about you myself," Johnson said. He held the gun steadily in his hand now, no longer pretending to play with it. "I told you that our second robbery occurred while I was a clerk with the Company," he went on. "They jerked me in to the Home Office, and for a while I had a pretty rough time . . . You know, when I joined the Company, I was an amnesiac. I remembered my name, but that's about all . . ."

"No, I didn't know," Hawkes muttered, growing slightly paler.

"I learned then from the Home Office that I had been a member of their Secret Service some twenty years earlier. I'd been sent

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here to investigate the first robbery. And I had disappeared. Naturally, they had suspected me.

"However, they had no evidence, and when I reappeared twenty years later they played it smart by just waiting, instead of arresting me. When the second robbery occurred, they closed in.

"The only thing that saved me was the fact that tests proved my memory was really gone, and that I had told the truth—as I knew it. From the few scraps of information I retained — about being out on the Moebius Strip— they and I arrived at the theory I mentioned a short time ago. I was sent back here to wait. The Company never gives up. Remember?"

"Are you insinuating that I was in cahoots with this fellow here?" Hawkes asked harshly.

"I'd say it was more than an insinuation," Johnson replied. "You made several other slips. In the first place, Secret Service men are usually better informed about a situation they're investigating than you seemed to be. Also, those identification papers you showed me were faked."

THE skin along the bridge of Hawkes' nose had drawn tight, and now his lips grew narrower. "In that case, why did I save you from that man this afternoon?" he asked. "And why would I shoot him now?"

"Your saving me was an act, to get into my confidence. You shot him so you wouldn't have to split the loot. I figure you were in with him on the second robbery also. There had to be someone because his memory would be gone, when he came off the Strip. But you weren't satisfied. Together you decided to pull off another robbery while you were here and double the spoils. Then you decided you wanted it all for yourself and you shot him."

"There's one big flaw in your reasoning," Hawkes pointed out. "How did I plan to get away? The only ships leaving here for several months belong to the Company. Do you think I'd be foolish enough to expect them to let me slip out on one of their ships?"

"No. I think you intended to go out on the Strip yourself."

"All right then," Hawkes countered. "You admitted that this was a two-man job. How could I protect myself when I returned, if I knew in advance that I wouldn't know who I was, let alone what I had done?"

"I'll come back to that in a minute," Johnson said. "But now I'd advise you to drop your gun on the floor and give yourself up. You've got nothing to gain by carrying on the bluff. You know

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I'll never let you get to the Strip. And, once I put you on the ship, the Company will take over."

HAWKES' shoulders drooped. Finally he smiled raggedly. "There's no use my arguing any longer," he said. "But you've made the mistake of underestimating me, my friend. I've lost my gamble. That's all. You have nothing on me. I'm not as ignorant of native law as I may have pretended. Granted, I am carrying a lethal weapon. But I'm on private property. That's legal. I shot a man. But only in defense of my own life. His gun on the floor will prove he came in armed. So I'm clean as far as the natives are concerned. Right?"

Johnson nodded.

"And, as for the Company, what will they hold me for? They can't prove any connection between me and him." Hawkes indicated the man on the floor. "And this robbery—it never actually came off. Earth laws don't allow prosecution for intent. Now, where does that leave you?"

Johnson stood up. "You're right—as far as you went," he said. "But, returning to your earlier question about one man pulling this job, I asked myself how I would do it, if it had to be done alone. And I found a way. You'd probably figure the same one. Now I'll take that paper in your pocket. It will serve very well as a confession."

Suddenly Hawkes' right hand streaked toward a side pocket. Johnson leaned forward and brought the flat of his gun across the other's temple.

As Hawkes sagged, Johnson ripped open his coat and took out a sealed envelope. He removed a sheet of paper and read:

This has been written for my own information. My name is Alton Hawkes. I have robbed the Interplanets Company and gone out on the Strip with the money. When I read this my memory will be gone and twenty years will have elapsed.

—CHARLES V. DE VET

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